

## **APPENDIX C**

### **2014 Groundwater and Surface Water Monitoring Report for the Biodegradable Site (BARC 6)**

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3107-14-005

May 30, 2014

Mr. Dana Jackson  
U.S. Department of Agriculture, SOHES  
Building 003, Room 121  
10300 Baltimore Avenue  
Beltsville, MD 20705-5116

REFERENCE: Contract No. AG-3K06-B-06-0001  
Task Order No. AG-3K06-K-10-0040

SUBJECT: Letter Report - Biodegradable Landfill Site (BARC 6), March 2014 Groundwater and Surface Water Quality Monitoring Report

Dear Mr. Jackson:

BMT Designers and Planners, Inc. (BMT) is pleased to submit the following letter report, providing a description of field activities and summary of findings for the March 2014 monitoring well and surface water sampling at the Biodegradable Site. In coordination with Advantage Environmental Consultants, LLC (AEC), the environmental contractor representing the suspected offsite source of contamination ("Ballard Site"), BMT conducted a complete, contemporaneous groundwater monitoring well gauging and sampling event on all existing BARC 6 monitoring wells and all AEC offsite monitoring wells. Additionally, the sampling event included the collection of surface water samples from Indian Creek. Attached are a site map of monitoring well and surface water sampling locations, a groundwater elevation contour map, summary data tables, and tag maps depicting results for primary contaminants of concern (COCs). COC concentration trend graphs, for each of the wells where the COCs are regularly detected, are also included as an attachment.

### **Monitoring Well Summary**

#### **BARC 6 Monitoring Wells**

This Remedial Investigation/Feasibility Study (RI/FS) site has 26 wells. Eleven wells were installed in the mid-1990s. Ten wells were installed as part of the 1998 Remedial Investigation (RI). In June 2010, five monitoring wells were installed at the Biodegradable Site with 2-inch inside diameter (ID) nested channels. An additional well with nested channels, MW11R was installed in 2011 to replace a monitoring, MW11, that was destroyed during renovations at WMATA.

MW17 was abandoned in 2013 during the construction of a parking garage on the WMATA yard. BARC 6 monitoring well construction details and well location information are presented in Table 1.

**Table 1. Monitoring Well Construction Details and Locations**

Monitoring Well ID	Construction Date	Construction Details		Location	Location Relative to the Biodegradable Landfill
		Channels	ID (inches)		
MW1	1991	1	4	WMATA wetlands	Downgradient
MW2	1991	1	4	WMATA wetlands	Downgradient
MW3	1991	1	4	WMATA wetlands	Downgradient
MW4	1991	1	4	WMATA wetlands	Downgradient
MW5	1991	1	4	Animal Parasitology Unit	Sidegradient
MW6	1991	1	4	WMATA rail yard	Upgradient
MW7	1992	1	4	WMATA rail yard	Upgradient
MW8	1992	1	4	WMATA wetlands	Downgradient
MW9	1992	1	4	WMATA wetlands	Downgradient
MW10	1992	1	4	WMATA wetlands	Downgradient
MW11-R	2011	3	2	WMATA rail yard	Upgradient
MW12	1998	1	2	George Washington Carver Center	Upgradient
MW13	1998	1	2	George Washington Carver Center	Upgradient
MW14	1998	1	2	WMATA rail yard	Upgradient
MW15	1998	1	2	WMATA rail yard	Sidegradient
MW15R:1-3	2010	3	2	WMATA rail yard	Sidegradient
MW16:1-3	1998	1	3/4	Biodegradable Site	Landfill Well
MW18	1998	1	2	WMATA rail yard	Downgradient
MW19	1998	1	2	Edmonston Rd. south of Sunnyside Ave.	Sidegradient
MW20:1-3	1998	1	3/4	WMATA rail yard	Downgradient
MW21	Unknown	1	< 2	WMATA rail yard	Upgradient
MW22:1-3	2010	3	2	George Washington Carver Center	Upgradient
MW23:1-3	2010	3	2	Sunnyside Ave. east of WMATA entrance	Upgradient
MW24:1-2	2010	2	2	George Washington Carver Center	Upgradient
MW25:1-2	2010	2	2	George Washington Carver Center	Sidegradient

### AEC Offsite Monitoring Wells

There are 28 wells located in an industrial park in the vicinity of the Ballard Site. In 2002, AEC installed 20 wells (OMW-1 through OMW-20) and subsequently installed 7 additional wells (OMW-21 through OMW-27) in 2008 and one additional well (OMW-28) in 2010. These off-site monitoring wells were installed to monitor contamination in groundwater suspected to have originated from the Ballard Site and are screened over the full depth of each well.

Of the 28 AEC offsite monitoring wells, 22 were sampled for VOCs during the July 2014 sampling event. Offsite monitoring wells OMW-4, OMW-8, OMW-13, OMW-16, and OMW-20 were abandoned by AEC and were not part of the sampling program. OMW-12 could not be sampled concurrently with the other AEC wells due to access issues. Figure 1 depicts the locations of all AEC offsite monitoring wells and all BARC 6 monitoring wells.

### Description of Field Activities

#### Groundwater Sampling Methodology

Passive Diffusion Bag (PDB) sampling methodology was used to sample all monitoring wells with a 2-inch inside diameter (ID) or greater. Additionally, monitoring well MW21, which has an approximate ID of 1.5-

inch ID, was also sampled using PDB methodology. PDBs work on the principle of diffusion, i.e., chemical compounds dissolved in groundwater move from areas of high concentration outside the sampler to the initially low concentration inside the sampler until equilibrium is reached. PDBs are an effective tool for collecting samples for analysis of chlorinated and aromatic volatile organic compounds (VOCs) because these compounds readily diffuse. The PDB sampler is positioned at the target horizon within the well screen by attachment to a weighted line. In the “new” (2010-2011) BARC 6 wells (MW11R, MW15R, MW22, MW23, MW24, MW25) and 4 AEC wells (OMW-9, OMW-10, OMW-22, and OMW-28), PDBs were “stacked” with multiple PDBs positioned every 10 to 20 feet within the well screened interval. Each PDB was deployed more than 2 weeks prior to sample collection.

Monitoring wells MW16 and MW20 have IDs of less than 2 inches and are too narrow to accept a PDB sampler. These wells were sampled with low-flow sampling methodology using a ball and check valve. Samples were collected at the midpoint of the screened interval. If the groundwater level was observed to be below the top of the well screen, samples were collected from the midpoint of the available water column. Field measurements, including dissolved oxygen, temperature, salinity, pH, specific conductivity, turbidity, and oxidation-reduction potential (ORP), were recorded for wells sampled with low-flow sampling methodology to ensure stabilization of groundwater conditions prior to sample collection. Measurements were taken using a Horiba® U-52 Multiparameter Water Quality Meter and were recorded on groundwater sampling forms and in the project field logbook.

Each well was inspected prior to sampling by the field crew for integrity, physical damage, or tampering. Immediately prior to PDB sampler deployment, depth to groundwater was measured using a water level indicator to 0.01 foot accuracy at the permanent reference point marked on each well casing. These groundwater elevations are presented in groundwater elevation contour maps for shallow and deep aquifer units (Figures 2 and 3).

Sample containers were labeled using a unique sample designation and preserved in accordance with the appropriate SW-846 protocol. The depth of each sample collected is encoded in the sample designation (e.g., MW1-GW@5.15'). After collection, each groundwater sample was entered on a chain-of-custody (CoC) form. The CoC documents the date and time of sample collection, sample type, and the required analytical methods for each sample. Samples were under custody of BMT personnel until such time that they were relinquished for shipment to the laboratory for analysis. Monitoring wells MW4, MW12, MW11R-1, MW11R-3, MW15R-1, MW16-3, MW22-3, MW23-1, MW23-3, MW24-2, OMW-2, OMW-11, and OMW-22 were sampled in duplicate to assess sampling and analytical precision.

### **Surface Water Sampling**

Surface water samples were collected from five locations within Indian Creek, in close proximity to the Biodegradable Site, during the March 2014 sampling event. One surface water sampling location is located upgradient and four locations are located downgradient of the Ballard Site. A surface water sampling location map is included as Figure 1. Each surface water sample was analyzed for TCL VOCs by SW-846 method 8260B. Water quality parameters were also taken at each sampling location, including dissolved oxygen, temperature, salinity, pH, specific conductivity, turbidity, and ORP. Measurements were taken using a Horiba® U-52 Multiparameter Water Quality Meter, and recorded in the field log book and on a Surface Water Sampling Form.

### **Summary of Results**

The primary COCs identified in groundwater at the Biodegradable Site are the chlorinated aliphatic compounds tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), and cis-1,2-dichloroethene (cis-1,2-DCE). Other COCs include 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethane (1,1-DCA), and chloroform. Observed COC concentrations in groundwater may be attributable to an upgradient source of contamination (i.e., the Ballard Site), located approximately 3,400 feet northwest of the Biodegradable Site. In general terms, for any given well, TCE is present at the highest concentration with PCE, cis-1,2-DCE, and 1,1-DCE present at lower concentrations. Lower concentrations of 1,1,1-TCA, 1,1,2-TCA, and/or chloroform may also be present.

Within the OMWs located in the vicinity of the former Ballard Property, PCE is present at the highest concentration with TCE and 1,1-DCE present at lower concentrations. A more detailed discussion of contaminant concentrations and emerging trends is presented below.

### **Groundwater**

Tables A-1 and A-3 (Attachment A) show the frequency of detection, maximum detected concentration, location of the maximum, and parameters detected above their respective Maximum Contaminant Levels (MCLs) (where applicable) in BARC 6 monitoring wells and AEC offsite monitoring wells, respectively. Tables A-2 and A-4 present a summary of detected parameters in each BARC 6 monitoring well and AEC offsite monitoring well. Detections are presented in bold and concentrations above respective MCLs are presented in shaded cells. Samples with analytes present at concentrations high enough to exceed instrument calibrations were re-analyzed with a dilution factor to obtain a more accurate result. These subsequent analytical runs are called “re-runs” and use an “RR” identifier. For example, BA6-MW12-RR1 is the first re-run of the groundwater sample BA6-MW12. The original result is, if considered unreliable or potentially inaccurate, is given the “R” data validation qualifier.

The results of groundwater sampling are presented below by area of the site. COCs detected above their respective MCLs are noted and concentration trends over time are identified and presented in Tables 2 through 5. Graphical representations of concentration trends over time are included in Attachment B. A tag map depicting analytical results for primary COCs detected at concentrations greater than their respective MCLs is included as Attachment C.

### **Wetland Area Wells**

Monitoring wells MW1, MW2, MW3, MW4, MW8, MW9, and MW10 are located in the wetlands east of the Biodegradable Site. A summary of results from wetland area wells, including sample collection elevation, COCs detected above MCLs, other COCs detected, and concentration trends over time are presented in Table 2.

### **Downgradient and Sidegradient Wells**

Downgradient wells include MW18 and MW20. Sidegradient wells include monitoring wells MW5, MW15, MW15R, MW17, MW19 and MW25. A summary of results for downgradient and sidegradient wells including sample collection elevation, COCs detected above MCLs, other COCs detected, and concentration trends over time are presented in Table 3.

### **Upgradient Wells**

The highest concentrations of COCs are typically found in upgradient wells, i.e., those closest to the Ballard Site. These wells include monitoring wells MW6, MW7, MW11R, MW12, MW13, MW14, MW21, MW22, MW23 and MW24. A summary of results for upgradient wells including sample collection elevation, COCs detected above MCLs, other COCs detected, and concentrations trends over time are presented in Table 4.

### **Landfill Well**

One monitoring well is located in the former landfill area of the Biodegradable Site (MW16). Monitoring well MW16 is a nested well with three channels. A summary of results for the landfill well including sample collection elevation, COCs detected above MCLs, other COCs detected, and concentrations trends over time are presented in Table 5.

### **Surface Water**

In March of 2014, 5 surface water samples were collected from various locations along Indian Creek. Surface water samples were analyzed for TCL VOCs. A surface water sampling location map is included as Figure 1. At each sample location, surface water physical parameters were recorded using a Horiba® U-52 Multi-parameter Water Quality Meter and are summarized in Table 6.

Table A-5 (Attachment A) shows the frequency of detection, maximum detected concentration, location of the maximum, and parameters detected above their respective Ambient Water Quality Criteria (AWQC) for surface water samples. Table A-6 presents a summary table showing detected parameters in each surface water sample.

PCE was detected in 5 of 5 surface water samples, and TCE was detected in 3 of 5 surface water samples. Chloroform was the only other VOC detected in surface water during the March 2014 event. PCE was the only parameter detected above AWQC in 3 samples. A tag map depicting primary COC concentrations is included in Attachment C.

**Table 2: March 2014 Wetland Monitoring Wells Summary of Results**

Well ID	Screened Interval (fbgs)	Sample Elevation (famsl)	COCs greater than MCL	Other COCs Detected	Trends
MW1	3-7.5	72	TCE (12 ppb)	1,1,1-TCA 1,1-DCA Cis-1,2-DCE PCE	General slight decrease since July 2012. TCE decreased from 14 to 12 ug/L since July 2012.
MW2	5.9-10.4	70	TCE (12ppb)	1,1,1-TCA 1,1-DCA 1,1-DCE Cis-1,2-DCE PCE	General slight decrease since July 2012.
MW3	3-7	72	TCE (7.6ppb)	1,1,1-TCA 1,1-DCE Dichlorodifluoromethane Cis-1,2-DCE TCE	General increase since July 2012.
MW4	3-7	71	TCE (9.5ppb)	1,1,1-TCA 1,1-DCE Cis-1,2-DCE chloroform Dichlorodifluoromethane PCE	General increase since July 2012.
MW8	24-30	46	NONE	1,1,1-TCA 1,1-DCE Chloroform MTBE PCE TCE	Typical for MW8. General slight decrease since July 2012. Significantly decreased from 2006 peak concentrations.
MW9	27-43	42	TCE (6.5 ppb)	1,1,1-TCA 1,1-DCE Cis-1,2-DCE MTBE PCE PCE	Typical for MW9. Concentrations similar to those between 2006 and 2011, significantly decreased from 2004 peak concentrations. TCE decreased from 16 to 6.5 ug/L since July 2012.
MW10	29-44	39	1,1-DCE (12 ppb) PCE (5.2 ppb) TCE (6.1 ppb)	1,1,1-TCA 1,1,2-Trichloro-1,2,2-trifluoroethane 1,1-DCA Chloroform Cis-1,2-DCE MTBE	Typical for MW10. General slight decrease since July 2012. Levels down from 2004 peak.

Note:

famsl – feet above mean sea level

ppb – parts per billion or micrograms per liter

**Table 3: March 2014 Downgradient and Sidegradient Monitoring Wells Summary of Results**

Well ID	Screened Interval (fbgs)	Sample Elevation (famsl)	COCs greater than MCL	Other COCs Detected	Trends
MW5	NA	NA	NONE	NONE	Typical for MW5.
MW15	49-69	59	1,1-DCE (17 ppb) PCE (5 ppb) TCE (29 ppb)	1,1,1-TCA 1,1,2-Trichloro-1,2,2,-trifluoroethane 1,1-DCA Chloroform Cis-1,2-DCE MTBE	TCE decreased from 62 to 29ppb since July 2012. 1,1-DCE decreased from 37 to 17ppb since July 2012.
MW15R-1	4-38	70, 60, & 50	1,1-DCE (15 ppb)* TCE (25 ppb)*	1,1,1-TCA 1,1,2-Trichloro-1,2,2,-trifluoroethane 1,1-DCA Chloroform Cis-1,2-DCE MTBE PCE	Typical for MW15R-1.
MW15R-2	40-85	43, 33, 23, 13, & 3	1,1-DCE (11 ppb)* TCE (19 ppb)*	1,1,1-TCA 1,1-DCA Cis-1,2-DCE MTBE PCE	TCE decreased from 36ppb to 19ppb since July 2012. 1,1-DCE decreased fro 18-11 ppb in the same time interval.
MW15R-3	90-140	-12, -22, -32, -42, & -52	TCE (16 ppb)*	1,1,1-TCA Chloroform Cis-1,2-DCE 1,1-DCE MTBE PCE Trichlorofluoromethane	Typical for MW15R-3.
MW17	50-70	26	TCE (6.4 ppb)	1,1,1-TCA 1,1-DCE Chloroform MTBE PCE	General increase since June 2011.
MW19		26	NONE	NONE	Typical for MW19.
MW20-1	131-151	NS	NONE	MTBE TCE Trichlorofluoromethane	Typical for MW20-1.
MW20-2	94-114	-30	TCE (24 ppb)	1,1,1-TCA 1,1-DCE Cis-1,2-DCE PCE	Slight decrease since July 2012.
MW20-3	40-60	24	1,1-DCE (13 ppb) TCE (30 ppb)	1,1,1-TCA 1,1-DCA Chloroform Cis-1,2-DCE MTBE PCE	Slight decrease since July 2012.

**Table 3 (continued): March 2014 Downdgradient and Sidegradient Monitoring Wells Summary of Results**

Well ID	Screened Interval (fbgs)	Sample Elevation (famsl)	COCs greater than MCL	Other COCs Detected	Trends
MW25-1	4-80	79, 69, 59, 49, 39, 29, 19	NONE	1,1-DCE MBTE TCE	1,1,1-TCA, 1,1-DCA, chloroform, cis-1,2-DCE, and PCE not detected. Detected in trace quantities in July 2012.
MW25-2	90-140	-1, -11, -21, -31, -41	1,1-DCE (21 ppb)* TCE (34 ppb)* PCE (6.8 ppb)*	1,1,1-TCA 1,1-DCA Chloroform Cis-1,2-DCE MTBE Trichlorofluoromethane	Typical for MW25-2. Slight increase since July 2012.

Note:

NA – Not Available – No survey data available

famsl – feet above mean sea level

ppb – parts per billion or micrograms per liter

\*Maximum concentration in well – see tag map for results by elevation

**Table 4: March 2014 Upgradient Monitoring Wells Summary of Results**

Well ID	Screened Interval (fbgs)	Sample Elevation (famsl)	COCs greater than MCL	Other COCs Detected	Trends
MW6	9-18	78	NONE	NONE	Typical for MW6.
MW7	27-42	51	1,1-DCE (21 ppb) TCE (39 ppb) PCE (9.3 ppb)	1,1,1-TCA 1,1,2-Trichloro-1,2,2-trifluoroethane 1,1-DCA Chloroform Cis-1,2-DCE MTBE	Typical fluctuation for MW7, increased from July 2012.
MW11R-1	10-30	85, 75, 65	NONE TCE (7.6 ppb)	1,1,1-TCA 1,1,2-Trichloro-1,2,2-trifluoroethane 1,1-DCE Chloroform Cis-1,2-DCE MTBE Naphthalene PCE TCE	Second sampling event for MW11R-1. General decrease since June 2011.
MW11R-2	40-50	45	1,1-DCE (15 ppb) PCE (7.5 ppb) TCE (28 ppb)	1,1,1-TCA 1,1,2-Trichloro-1,2,2-trifluoroethane 1,1-DCA Chloroform Cis-1,2-DCE MTBE	Third sampling event for MW11R-2. General decreasesince Julu 2012.
MW11R-3	60-130	25, 15, 5, -5, -15, -25, -35	NONE	Chloroform PCE	Third sampling event for MW11R-3. COC detection consistent w ith past events.
MW12	60-80	30	1,1-DCE (57 ppb) PCE (15 ppb) TCE (68 ppb)	1,1,1-TCA 1,1,2-Trichloro-1,2,2-trifluoroethane 1,1-DCA Chloroform Cis-1,2-DCE MTBE Trichlorofluoromethane	Typical for MW12. General decrease since July 2012.
MW13	60-80	29	1,1-DCE (41 ppb) PCE (8 ppb) TCE (64 ppb)	1,1,1-TCA 1,1,2-Trichloro-1,2,2-trifluoroethane 1,1-DCA Chloroform Cis-1,2-DCE MTBE	Typical for MW13. General decrease since July 2012.
MW14	49-69	24	NONE	TCE	Typical for MW14.
MW21	NA	NA	1,1-DCE (38 ppb) PCE (13 ppb) TCE (59 ppb)	1,1,1-TCA 1,1,2-Trichloro-1,2,2-trifluoroethane 1,1-DCA Cis-1,2-DCE MTBE	Typical for MW21.
MW22-1	5-40	86, 76, 66	NONE	TCE	Typical for MW22-1.
MW22-2	49-79	54, 47, 37, 27	1,1-DCE (23 ppb)* PCE (9 ppb)* TCE (38 ppb)*	1,1,1-TCA 1,1-DCA Chloroform Cis-1,2-DCE MTBE	Decrease in DCE, TCE and PCE since July 2012. DCE decreased from 47 to 23 ug/L; PCE decreased from 15 to 9 ug/L; and TCE decreased from 86 to 49 ug/L.
MW22-3	87-137	14, 4, -6, -16, -26	NONE	Chloroform MTBE Trichlorofluoromethane	Typical for MW22-3.

**Table 4: March 2014 Upgradient Monitoring Wells Summary of Results (Continued)**

Well ID	Screened Interval (fbgs)	Sample Elevation (famsl)	COCs greater than MCL	Other COCs Detected	Trends
MW23-1	5-41	77, 67, 57, 47	1,1-DCE (29 ppb)* PCE (19 ppb)* TCE (53 ppb)*	1,1,1-TCA 1,1,2-Trichloro-1,2,2-trifluoroethane 1,1-DCA Chloroform Cis-1,2-DCE MTBE	Typical for MW23-1. General decrease in PCE, TCE and DCE.
MW23-2	43-68	40, 30, 20	NONE	1,1,1-TCA 1,1-DCE Cis-1,2-DCE MTBE PCE TCE	Typical for MW23-2. General decrease for PCE and TCE
MW23-3	81-116	2, -8, -18, -28	NONE	Chloroform Cis-1,2-DCE PCE TCE	Typical for MW23-3.
MW24-1	5-33	82	NONE	NONE	Typical for MW24-1.
MW24-2	40-140	65, 55, 45, 35, 25, 5, -5, -15, -25	1,1-DCE (20 ppb)* PCE (6.6 ppb)* TCE (27 ppb)*	1,1,1-TCA 1,1-DCA Chloroform Cis-1,2-DCE MTBE	Typical for MW24-2. Slight decrease since July 2012.

Note:

NA – Not Available – No survey data available

famsl – feet above mean sea level

ppb – parts per billion or micrograms per liter

**Table 5: March 2014 Landfill Monitoring Well Summary of Results**

Well ID	Screened Interval (fbgs)	Sample Elevation (famsl)	COCs greater than MCL	Other COCs Detected	Trends
MW16-1	120-140	52	1,1-DCE (6.3 ppb) TCE (29 ppb)	1,1,1-TCA 1,1-DCA Chloroform Cis-1,2-DCE MTBE PCE	1,1-DCE, TCE, PCE, cis-1,2-DCE and MBTE not typically detected in this well.
MW16-2	69-89	3	NONE	1,1-DCE MTBE TCE	Typical for MW16-2.
MW16-3	25-35	-48	1,1-DCE (19 ppb) TCE (30 ppb) PCE (5.7 ppb)	1,1,1-TCA 1,1,2-Trichloro-1,2,2-trifluoroethane 1,1-DCA Chloroform Cis-1,2-DCE MTBE PCE	Typical for MW16-3. Concentrations increased since July 2012, though generally increasing to typical levels after drop in concentrations in 2007.

Note:

famsl – feet above mean sea level

ppb – parts per billion or micrograms per liter

**Table 6. March 2014 Indian Creek Surface Water Sampling Physical Parameters**

Sample ID	Dissolved Oxygen (mg/L)	Temp (°C)	Salinity (%)	pH	Conductivity (mS/cm)	ORP (mV)	Turbidity (NTU)
SW1	7.69	6.14	0.5	6.03	1.83	23	0.0
SW2	8.24	5.82	0.5	5.87	1.12	190	0.0
SW3	6.70	5.84	0.5	5.84	1.07	107	4.1
SW4	6.55	6.02	0.5	5.56	1.07	189	0.1
SW5	7.34	5.29	0.3	5.37	.735	197	0.0

Note.

mg/L – milligrams per liter

mS/cm – millisiemens per centimeter

mV – millivolts

NTU – Nephelometric Turbidity Unit

Please call me at (703) 920-7070 Ext. 213 if you have any questions or require additional information.

Sincerely,

BMT Designers and Planners, Inc.



Patrick Phillips  
Project Manager

Approved By:



David Kindig, P.E.  
Program Manager

Enclosures:

Figures:

- Figure 1 – Monitoring Well and Surface Water Sample Location Map
- Figure 2 – Groundwater Elevation Contour Map, March 2014 – Shallow Wells
- Figure 3 – Groundwater Elevation Contour Map, March 2014 – Deep Wells

Attachments:

- Attachment A – Analytical Data Summary Tables
- Attachment B – COC Concentration Trend Graphs
- Attachment C – COC Tag Map

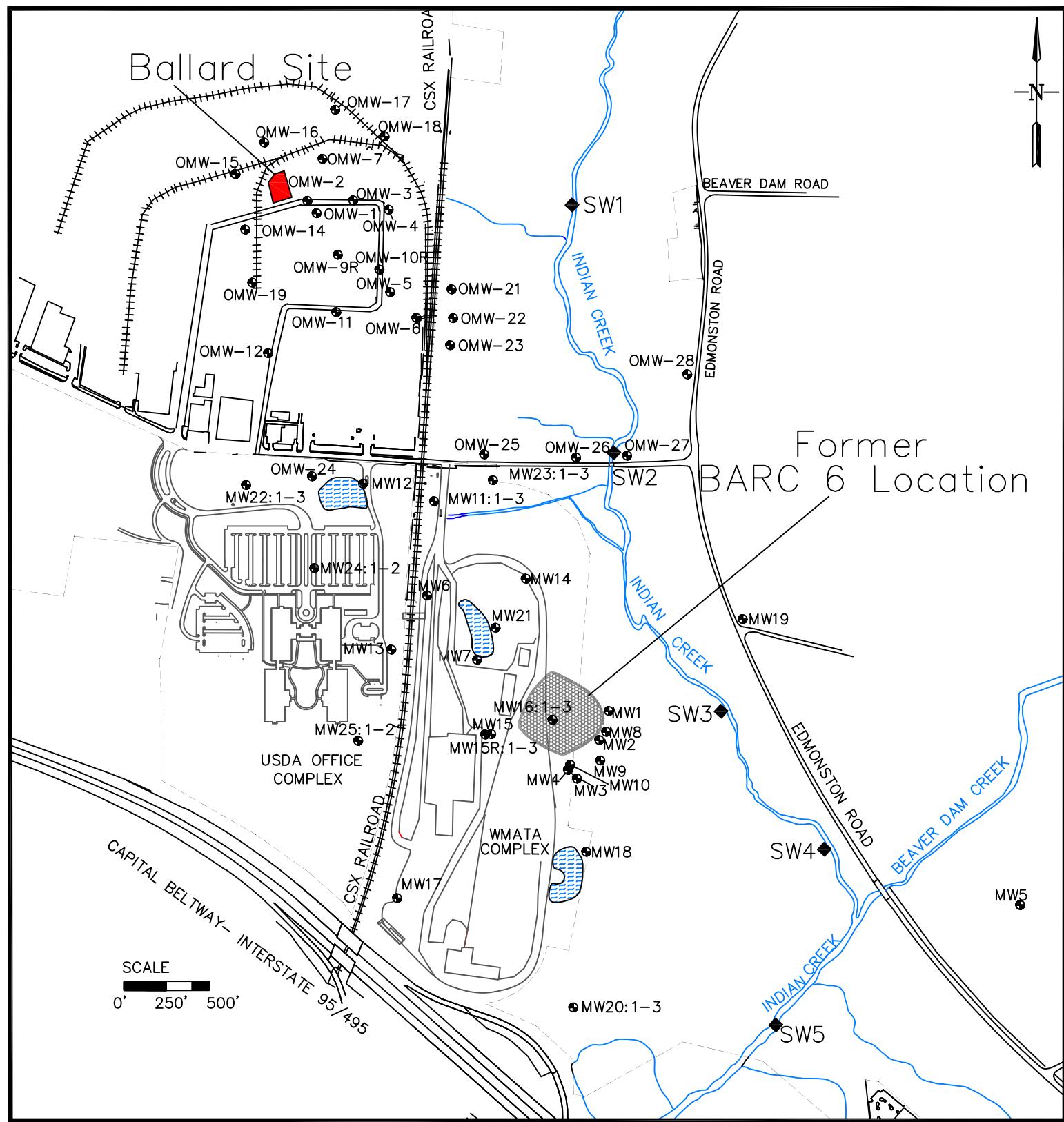


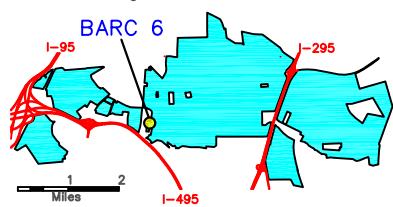
FIGURE 1

BARC 6 and Off-Site Monitoring Well and Surface Water Sample Location Map

LEGEND

- BARC6
- - - BARC Boundary
- Road
- ~~~~~ Creek
- Monitoring Well
- Buildings
- Rail Road
- Storm water retention pond
- ◆ Surface Water Sampling Location

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Note: Data qualifiers are not presented on this COC Tag Map.  
Please refer to Tables A-2 and A-4 for laboratory and data validation qualifiers.

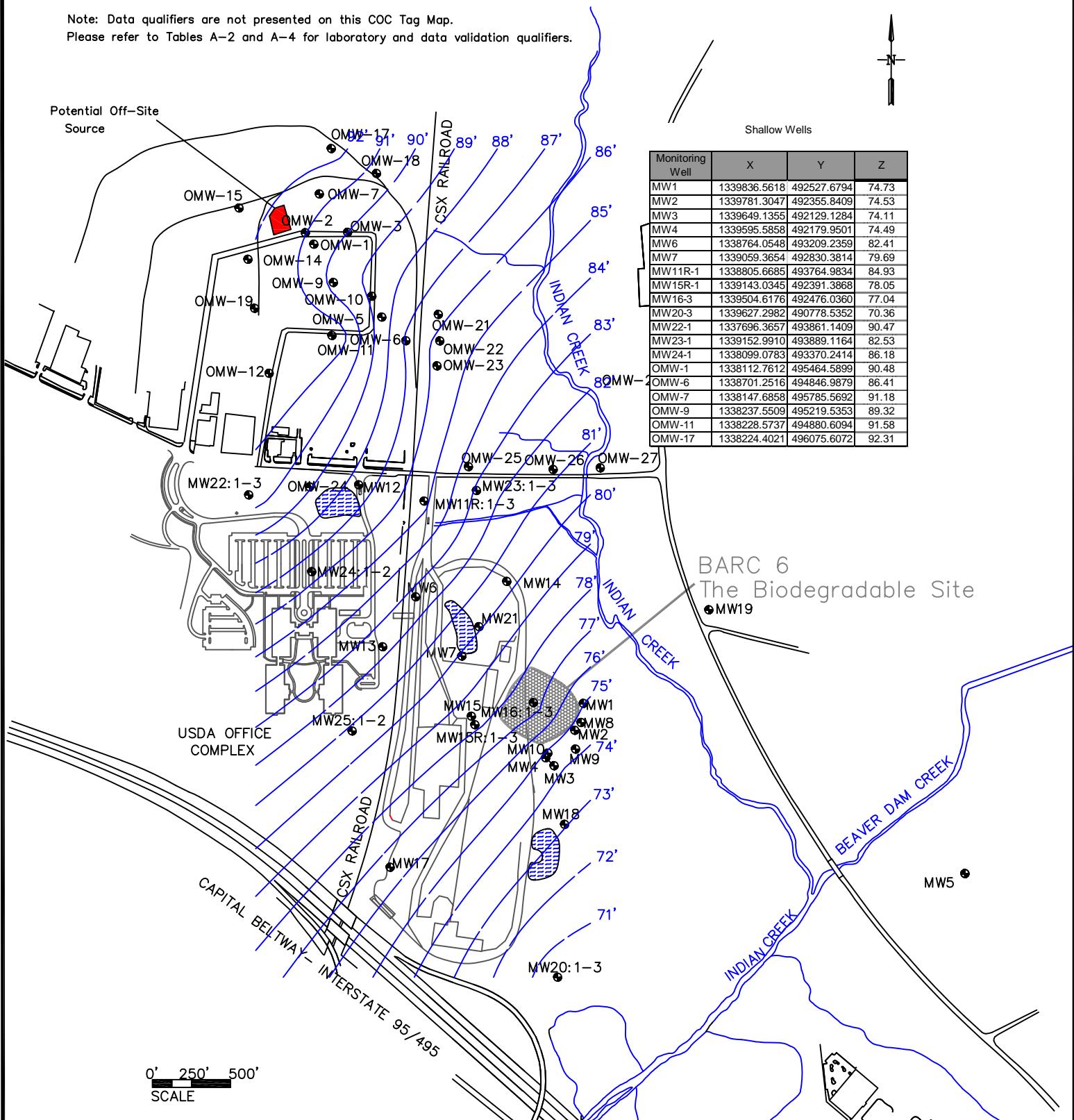


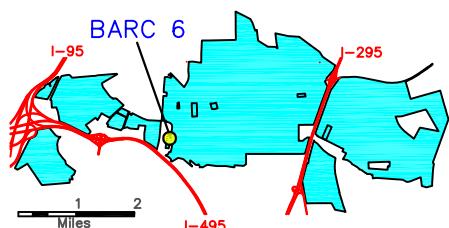
Figure: 2

**BARC 6:**  
Biodegradable Site  
Groundwater Elevation Contour  
Map, Feb 2014 – Shallow Wells

#### LEGEND

-  BARC6
-  Building
-  Road
-  Rail Road
-  Creek
-  Pond
-  Monitoring Well
-  Groundwater Elevation Contour
-  Inferred Groundwater Flow Direction
-  Inferred Groundwater Elevation Contour

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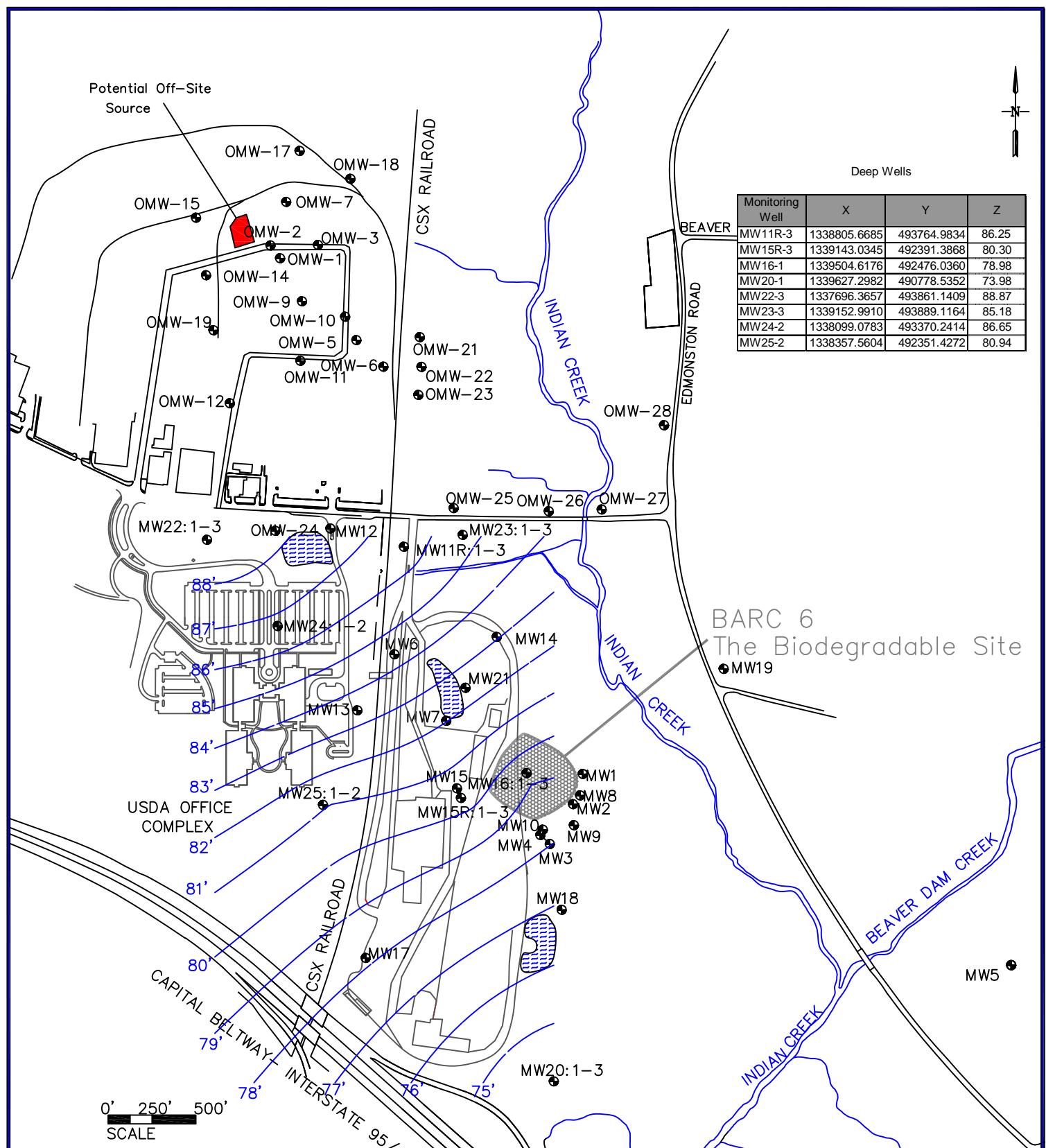


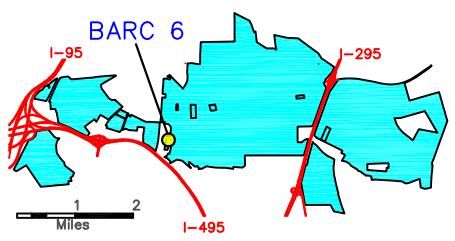
Figure: 3

BARC 6:  
Biodegradable Site  
Groundwater Elevation Contour  
Map, Feb 2014 – Shallow Wells

LEGEND

- BARC6
- Building
- Road
- Rail Road
- Creek
- Monitoring Well
- Inferred Groundwater Flow Direction
- Groundwater Elevation Contour
- Inferred Groundwater Elevation Contour

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**ATTACHMENT A**

**Analytical Data Summary Tables**

Table A-1. BARC 6 Biodegradable Site MCL Exceedances in Groundwater, March 2014

Parameter	Units	Frequency of Detection	Maximum Concentration	Maximum Sample ID	MCL	Maximum > MCL?	# Detections > MCL
1,1,1-TRICHLOROETHANE	µg/L	59 / 92	68	BA6-MW22-2-GW@76'	200	No	0
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	µg/L	21 / 92	3.6	BA6-MW23-1-GW@18'	NA	NA	NA
1,1-DICHLOROETHANE	µg/L	33 / 92	1.3	BA6-MW1-GW@5.25'	NA	NA	NA
1,1-DICHLOROETHENE	µg/L	61 / 92	41	BA6-MW12-GW@70'	7	Yes	39
2-BUTANONE	µg/L	55 / 92	26	BA6-MW1-GW@5.25'	NA	NA	NA
ACETONE	µg/L	80 / 92	48	BA6-MW1-GW@5.25'	NA	NA	NA
CHLOROFORM <sup>(1)</sup>	µg/L	53 / 92	0.8	BA6-MW1-GW@5.25'	70	No	0
CIS-1,2-DICHLOROETHENE	µg/L	57 / 92	14	BA6-MW23-1-GW@28'	70	No	0
DICHLORODIFLUOROMETHANE	µg/L	2 / 92	0.88	BA6-MW4-GW@5.65'	NA	NA	NA
METHYL TERTIARY BUTYL ETHER	µg/L	59 / 92	8.6	BA6-MW16-3-GW@30'	NA	NA	NA
NAPHTHALENE	µg/L	4 / 92	14	BA6-MW11R-1-GW@27'	NA	NA	NA
TETRACHLOROETHENE	µg/L	58 / 92	19	BA6-MW23-1-GW@28'	5	Yes	23
TRICHLOROETHENE	µg/L	66 / 92	69	BA6-MW12-GW@70'	5	Yes	53
TRICHLORODIFLUOROMETHANE	µg/L	18 / 92	1.3	BA6-MW22-3-GW@109'	NA	NA	NA

**Abbreviations**

ug/L - Microgram per liter (equivalent to parts per billion)

MCL - Maximum contaminant Level

N/A - Not applicable. No established MCL.

**Notes**

- Value shown is the MCLG for chloroform (70 µg/L)

Table A-2. BARC 6 Biodegradable Site VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	MW-10-GW@36_5'	MW11R-1-GW@10'	MW11R-1-GW@20'	MW11R-1-GW@30'	MW12-GW@70'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>17</b>	<b>1.6</b>	<b>1.8</b>	<b>2.2</b>	<b>54</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	<b>1.2</b>	<b>0.3J</b>	<b>0.38J</b>	0.3U	0.94J
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.4J	0.3U	0.3U	0.3U	1.2
1,1-DICHLOROETHENE	7	<b>12</b>	<b>3.4</b>	<b>3.9</b>	<b>4.6</b>	<b>41</b>
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>3.1J-L</b>	3U-R	3U-R	<b>5.5J</b>	<b>3.4J-L</b>
ACETONE	N/A	<b>7.5J-B</b>	<b>10</b>	9.4J	<b>9.6J-L</b>	<b>7.4J-B</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	<b>0.51J</b>	<b>0.32J</b>	<b>0.41J</b>	<b>0.48J</b>	<b>0.74J</b>
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>2.2</b>	<b>1.5</b>	<b>1.8</b>	<b>2.2</b>	<b>4.8</b>
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>2.2</b>	<b>1.3</b>	<b>2.5</b>	<b>3.6</b>	<b>3.6</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	<b>7.2</b>	<b>10</b>	<b>14</b>	0.3U
TETRACHLOROETHENE	5	<b>6.1</b>	<b>3.9</b>	<b>4.5</b>	<b>5</b>	<b>15</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	<b>32</b>	<b>5.8</b>	<b>6.7</b>	<b>7.6</b>	<b>69E-E</b>
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

Parameter	MCL	MW11R-2-GW@47'	MW11R-3-GW@107'	MW11R-3-GW@117'	MW11R-3-GW@127'	MW14-GW@58_5'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>11</b>	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	<b>1.5</b>	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	<b>0.62J</b>	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHENE	7	<b>15</b>	0.3U	0.3U	0.3U	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>3.5J-L</b>	3U-R	3U-R	3U-R	3U-R
ACETONE	N/A	<b>5.8J</b>	<b>8J</b>	<b>6J</b>	<b>6J</b>	<b>9.2J-B</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	<b>0.59J</b>	<b>0.45J</b>	<b>0.45J</b>	<b>0.44J</b>	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>3.9</b>	0.3U	0.3U	0.3U	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>5.9</b>	0.3U	0.3U	0.3U	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>7.5</b>	<b>0.32J</b>	<b>0.33J</b>	<b>0.3J</b>	<b>0.2U</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	<b>28</b>	0.3U	0.3U	0.3U	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

Parameter	MCL	MW11R-3-GW@67'	MW11R-3-GW@77'	MW11R-3-GW@87'	MW11R-3-GW@97'	MW15R-1-GW@35'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	0.3U	0.3U	<b>12</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	<b>0.5J</b>
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.39J
1,1-DICHLOROETHENE	7	0.3U	0.3U	0.3U	0.3U	<b>15</b>
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>3U-R</b>	3U-R	3U-R	3U-R	<b>4.7J</b>
ACETONE	N/A	<b>7.2J</b>	<b>5.6J</b>	<b>6.1J</b>	<b>5.4J</b>	<b>7.6J-L</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	<b>0.36J</b>	<b>0.41J</b>	<b>0.46J</b>	<b>0.45J</b>	<b>0.57J</b>
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U	0.3U	0.3U	0.3U	<b>1.5</b>
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	0.3U	0.3U	0.3U	<b>2.9</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.57J
TETRACHLOROETHENE	5	0.2U	<b>0.27J</b>	<b>0.23J</b>	<b>0.31J</b>	<b>4.6</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	<b>24</b>
TRICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

N/A - Not Applicable

#### Data Validation Qualifiers

- (stand to the right of dash, e.g., "U-D", or "N")
- B. Analyte detected in associated method blank.
- D. Result detected in sample with laboratory dilution.
- J. Estimated concentration.
- L. Indicates the reported value may be biased low.
- R. Unreliable. Analyte concentration may not be accurate
- UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-2. BARC 6 Biodegradable Site VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	MW12-GW@70'RR1	MW13-GW@70'	MW13-GW@70'RR1	MW15R-2-GW@62'	MW15R-2-GW@62' DUP
1,1,1,2-TETRACHLOROETHANE	NA	3U-RD	0.3U	3U-RD	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>51-D</b>	<b>45</b>	<b>40-RD</b>	<b>5.9</b>	<b>6.4</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	3U-RD	0.38J	3U-RD	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	3U-RD	0.3U	3U-RD	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	3U-RD	1.3	3U-RD	0.3U	0.32J
1,1-DICHLOROETHENE	7	<b>38-RD</b>	<b>41</b>	<b>38-RD</b>	<b>9.7</b>	<b>10</b>
1,2-DICHLOROETHANE	5	3U-RD	0.3U	3U-RD	0.3U	0.3U
2-BUTANONE	N/A	30U-RD	3U-R	30U-RD	<b>3.3J</b>	3U-R
ACETONE	N/A	30U-RD	3U-R	30U-RD	<b>7.8J-L</b>	<b>7.3J-J</b>
BENZENE	5	3U-RD	0.3U	3U-RD	0.3U	0.3U
BROMOBENZENE	N/A	3U-RD	0.3U	3U-RD	0.3U	0.3U
CHLOROFORM	70	3U-RD	<b>0.47J</b>	3U-RD	0.3U	0.3U
CHLOROMETHANE	N/A	3U-RD	0.3U	3U-RD	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>5J-RD</b>	<b>5.6</b>	<b>5.4J-RD</b>	<b>0.59J</b>	<b>0.69J</b>
DICHLORODIFLUOROMETHANE	N/A	3U-RD	0.3U	3U-RD	0.3U	0.3U
M+P-XYLENE	N/A	3U-RD	0.3U	3U-RD	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>3.2J-RD</b>	<b>1.8</b>	3U-RD	<b>1.4</b>	<b>1.6</b>
METHYLENE CHLORIDE	5	4.3U-RD	0.43U	4.3U-RD	0.43U	0.43U
NAPHTHALENE	N/A	3U-RD	0.3U	3U-RD	0.3U	0.3U
TETRACHLOROETHENE	5	<b>14-RD</b>	<b>8</b>	<b>7.9J-RD</b>	<b>1.9</b>	<b>2.1</b>
TOLUENE	1000	3U-RD	0.3U	3U-RD	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	3U-RD	0.3U	3U-RD	0.3U	0.3U
TRICHLOROETHENE	5	<b>68-D</b>	<b>69E-R</b>	<b>64-D</b>	<b>16</b>	<b>18</b>
VINYL CHLORIDE	2	3U-RD	0.3U	3U-RD	0.3U	0.3U

Parameter	MCL	MW15-GW@59'	MW15R-1-GW@15'	MW15R-1-GW@25'	MW15R-3-GW@107'	MW15R-3-GW@117'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>13</b>	<b>11</b>	<b>12</b>	<b>5.4</b>	<b>4.8</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	<b>0.63J</b>	<b>0.54J</b>	<b>0.59J</b>	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.46J	0.37J	0.41J	0.3U	0.3U
1,1-DICHLOROETHENE	7	<b>17</b>	<b>14</b>	<b>15</b>	<b>5.3</b>	<b>4.8</b>
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	3U-R	<b>4.6J</b>	<b>3.9J</b>	<b>3.3J-L</b>	3U-R
ACETONE	N/A	<b>7.7J-B</b>	<b>7.2J-L</b>	<b>7.6J-L</b>	<b>6.4J</b>	<b>5.8J-J</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	<b>0.57J</b>	<b>0.57J</b>	<b>0.58J</b>	0.3U	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	1.3	1.4	1.6	<b>0.47J</b>	<b>0.43J</b>
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>2.9</b>	<b>2.4</b>	<b>3.2</b>	<b>1.7</b>	<b>1.4</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>5</b>	<b>4.5</b>	<b>4.7</b>	<b>2.3</b>	<b>1.8</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	<b>29</b>	<b>23</b>	<b>25</b>	<b>8.3</b>	<b>7.4</b>
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

Parameter	MCL	MW15R-1-GW@35' DUP	MW15R-2-GW@42'	MW15R-2-GW@52'	MW15R-3-GW@97'	MW16-1-GW@130'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>12</b>	<b>5.5</b>	<b>5.6</b>	<b>7.1</b>	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	<b>0.54J</b>	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.41J	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHENE	7	<b>15</b>	<b>9.9</b>	<b>9.7</b>	<b>10</b>	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>4.5J</b>	3U-R	<b>3.3J</b>	3U-R	3U-R
ACETONE	N/A	<b>7.7J-L</b>	<b>6.6J-J</b>	<b>8.2J-L</b>	<b>5.8J-J</b>	3U-R
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	<b>0.6J</b>	0.3U	0.3U	0.3U	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	1.5	<b>0.65J</b>	<b>0.57J</b>	<b>0.66J</b>	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	3	1.2	1.3	2.6	<b>0.93J</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>4.5</b>	<b>1.8</b>	<b>1.7</b>	<b>3.2</b>	0.2U
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	<b>24</b>	<b>16</b>	<b>16</b>	<b>16</b>	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

N/A - Not Applicable

#### Data Validation Qualifiers

- (stand to the right of dash, e.g., "U-D", or "N")  
 B. Analyte detected in associated method blank.  
 D. Result detected in sample with laboratory dilution.  
 J. Estimated concentration.  
 L. Indicates the reported value may be biased low.  
 R. Unreliable. Analyte concentration may not be accurate  
 UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-2. BARC 6 Biodegradable Site VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	MW15R-2-GW@72'	MW15R-2-GW@82'	MW16-3-GW@30'	MW18-GW@59'	MW18-GW@59'RR1
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	3U-RD
1,1,1-TRICHLOROETHANE	200	<b>6.7</b>	<b>6.9</b>	<b>20</b>	<b>28</b>	<b>25-RD</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	<b>1.4</b>	<b>0.66J</b>	3U-RD
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	3U-RD
1,1-DICHLOROETHANE	N/A	0.3J	0.3U	<b>0.68J</b>	<b>1.1</b>	3U-RD
1,1-DICHLOROETHENE	7	<b>11</b>	<b>11</b>	<b>19</b>	<b>37</b>	<b>35-RD</b>
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	3U-RD
2-BUTANONE	N/A	<b>3.8J</b>	<b>4.2J</b>	3U-R	3U-R	30U-RD
ACETONE	N/A	<b>7.5J-L</b>	<b>7J-L</b>	3U-R	3U-R	30U-RD
BENZENE	5	0.3U	0.3U	0.3U	0.3U	3U-RD
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	3U-RD
CHLOROFORM	70	0.3U	0.3U	<b>0.6J</b>	<b>0.66J</b>	3U-RD
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	3U-RD
CIS-1,2-DICHLOROETHENE	70	<b>0.7J</b>	<b>0.75J</b>	<b>2.7</b>	<b>3.1</b>	<b>3.6J-RD</b>
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	3U-RD
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	3U-RD
METHYL TERTIARY BUTYL ETHER	N/A	<b>1.5</b>	<b>1.5</b>	<b>8.6</b>	<b>3.9</b>	<b>3.5J-RD</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	4.3U-RD
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	3U-RD
TETRACHLOROETHENE	5	<b>2.4</b>	<b>2.5</b>	<b>5.7</b>	<b>9.4</b>	<b>8.4J-RD</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	3U-RD
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	3U-RD
TRICHLOROETHENE	5	<b>18</b>	<b>19</b>	<b>33</b>	<b>69E-R</b>	<b>63-D</b>
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	3U-RD

Parameter	MCL	MW15R-3-GW@127'	MW15R-3-GW@137'	MW1-GW@5_25'	MW20-1-GW@141'	MW20-2-GW@104'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>0.87J</b>	<b>0.54J</b>	<b>4.9</b>	0.3U	<b>2</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	<b>0.42J</b>	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	<b>1.3</b>	0.3U	0.3U
1,1-DICHLOROETHENE	7	<b>2</b>	<b>1.3</b>	<b>6</b>	0.3U	<b>4.3</b>
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	3U-R	3U-R	<b>26-L</b>	3U-R	3U-R
ACETONE	N/A	<b>5.2J-J</b>	<b>5.9J-J</b>	<b>48-B</b>	3U-R	3U-R
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U	0.3U	<b>1.4</b>	0.3U	<b>1.3</b>
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	0.3U	0.3U	<b>1.5</b>	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>0.21J</b>	0.2U	<b>2.1</b>	0.2U	<b>0.28J-B</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	<b>3.6</b>	<b>2.3</b>	<b>12</b>	<b>0.36J</b>	<b>24</b>
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

Parameter	MCL	MW16-1-GW@130' DUP	MW16-2-GW@79'	MW21-GW@33'	MW21-GW@33'RR1	MW22-1-GW@17'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	3U-RD	0.3U
1,1,1-TRICHLOROETHANE	200	<b>6.3</b>	0.3U	<b>32</b>	<b>29-D</b>	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	2.5	3U-RD	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	3U-RD	0.3U
1,1-DICHLOROETHANE	N/A	<b>0.47J</b>	0.3U	1.1	3U-RD	0.3U
1,1-DICHLOROETHENE	7	<b>13</b>	<b>0.33J</b>	<b>38</b>	<b>34-RD</b>	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	3U-RD	0.3U
2-BUTANONE	N/A	3U-R	3U-R	3U-R	30U-RD	<b>12</b>
ACETONE	N/A	3U-R	3U-R	<b>11-B</b>	<b>48J-RD</b>	<b>8.3J-J</b>
BENZENE	5	0.3U	0.3U	0.3U	3U-RD	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	3U-RD	0.3U
CHLOROFORM	70	<b>0.33J</b>	0.3U	0.8J	3U-RD	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	3U-RD	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>1.1</b>	0.3U	<b>4.4</b>	<b>4.6J-RD</b>	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	3U-RD	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	3U-RD	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>5.1</b>	<b>0.48J</b>	<b>2.2</b>	3U-RD	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	4.3U-RD	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	3U-RD	0.3U
TETRACHLOROETHENE	5	<b>1.2</b>	0.2U	<b>12</b>	<b>13-RD</b>	0.2U
TOLUENE	1000	0.3U	0.3U	0.3U	3U-RD	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	3U-RD	0.3U
TRICHLOROETHENE	5	<b>29</b>	<b>0.66J</b>	<b>64E-R</b>	<b>59-D</b>	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	3U-RD	0.3U

N/A - Not Applicable

#### Data Validation Qualifiers

- (stand to the right of dash, e.g., "N-J", or "-B")  
 B. Analyte detected in associated method blank.  
 D. Result detected in sample with laboratory dilution.  
 J. Estimated concentration.  
 L. Indicates the reported value may be biased low.  
 R. Unreliable. Analyte concentration may not be accurate  
 UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-2. BARC 6 Biodegradable Site VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	MW19-GW@59' 5'	MW22-1-GW@27' DUP	MW22-1-GW@37'	MW22-2-GW@49'	MW22-2-GW@56'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	0.3U	<b>57</b>	<b>58</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	0.3U	0.46J	0.53J
1,1-DICHLOROETHENE	7	0.3U	0.3U	0.3U	<b>22</b>	<b>23</b>
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	3U-R	<b>5.4J</b>	<b>5J</b>	<b>3.7J</b>	<b>4.1J</b>
ACETONE	N/A	3U-R	<b>8.2J-J</b>	<b>9.1J-J</b>	<b>6.5J-J</b>	<b>7.5J-J</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	0.3U	0.3U	0.3U	0.38J	0.39J
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U	0.3U	0.3U	<b>2.7</b>	<b>2.6</b>
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	0.3U	0.3U	<b>2.3</b>	<b>2.3</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	0.2U	0.2U	0.2U	<b>8.4</b>	<b>8.6</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	0.3U	0.3U	0.3U	<b>35</b>	<b>36</b>
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

Parameter	MCL	MW20-3-GW@50'	MW22-2-GW@66'	MW22-2-GW@76'	MW22-2-GW@76'RR1	MW22-3-GW@109'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	1.5U-RD	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>6.3</b>	<b>59</b>	<b>63-D</b>	<b>68E-R</b>	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	1.5U-RD	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	1.5U-RD	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.48J	0.5J	1.5U-RD	0.51J	0.3U
1,1-DICHLOROETHENE	7	<b>13</b>	<b>23</b>	<b>21-RD</b>	<b>23</b>	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	1.5U-RD	0.3U	0.3U
2-BUTANONE	N/A	3U-R	3U	15U-RD	<b>3.9J</b>	<b>3.4J</b>
ACETONE	N/A	3U-R	<b>7.3J-J</b>	<b>16J-RD</b>	<b>6.9J-J</b>	<b>8.3J-J</b>
BENZENE	5	0.3U	0.3U	1.5U-RD	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	1.5U-RD	0.3U	0.3U
CHLOROFORM	70	0.31J	0.42J	1.5U-RD	0.33J	0.45J
CHLOROMETHANE	N/A	0.3U	0.3U	1.5U-RD	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>0.94J</b>	<b>2.5</b>	<b>2.6J-RD</b>	<b>3.1</b>	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	1.5U-RD	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	1.5U-RD	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>4.8</b>	<b>2.2</b>	<b>2.1J-RD</b>	<b>2.3</b>	<b>0.8J</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	2.2U-RD	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	1.5U-RD	0.3U	0.3U
TETRACHLOROETHENE	5	<b>1.1-B</b>	<b>9</b>	<b>7.2-RD</b>	<b>6.8</b>	0.2U
TOLUENE	1000	0.3U	0.3U	1.5U-RD	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	1.5U-RD	0.3U	0.3U
TRICHLOROETHENE	5	<b>30</b>	<b>36</b>	<b>35-RD</b>	<b>38</b>	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	1.5U-RD	0.3U	0.3U

Parameter	MCL	MW22-1-GW@27'	MW22-3-GW@119'	MW22-3-GW@129'	MW22-3-GW@89'	MW22-3-GW@99'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHENE	7	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>6.1J</b>	<b>4.7J</b>	<b>5.7J</b>	<b>4.3J</b>	<b>4.4J</b>
ACETONE	N/A	<b>8.1J-J</b>	<b>8.6J-J</b>	<b>7.4J-J</b>	<b>8.1J-J</b>	<b>8.3J-J</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	0.3U	0.3U	0.3U	<b>0.51J</b>	<b>0.5J</b>
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U	0.3U	0.3U	0.3U	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	<b>0.59J</b>	0.3U	<b>0.66J</b>	<b>0.69J</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	0.2U	0.2U	0.2U	0.2U	0.2U
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

N/A - Not Applicable

#### Data Validation Qualifiers

- (stand to the right of dash, e.g., "U-D", or "N")
- B. Analyte detected in associated method blank.
- D. Result detected in sample with laboratory dilution.
- J. Estimated concentration.
- L. Indicates the reported value may be biased low.
- R. Unreliable. Analyte concentration may not be accurate
- UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-2. BARC 6 Biodegradable Site VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	MW23-1-GW@18'	MW23-1-GW@28'	MW23-1-GW@38'	MW23-1-GW@38' DUP	MW23-3-GW@93'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>19</b>	<b>19</b>	<b>18</b>	<b>18</b>	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	<b>3.6</b>	<b>3.4</b>	<b>3.5</b>	<b>3.3</b>	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	<b>1.1</b>	<b>1</b>	<b>1</b>	<b>1</b>	0.3U
1,1-DICHLOROETHENE	7	<b>29</b>	<b>29</b>	<b>27</b>	<b>26</b>	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>4.4J-L</b>	<b>4.8J-L</b>	<b>4.5J-L</b>	<b>4.3J-L</b>	3U-R
ACETONE	N/A	<b>5.9J-J</b>	<b>7.7J-J</b>	<b>5.4J-J</b>	<b>6.4J-J</b>	3U
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	<b>0.78J</b>	<b>0.77J</b>	<b>0.77J</b>	<b>0.77J</b>	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>13</b>	<b>14</b>	<b>13</b>	<b>13</b>	<b>0.34J</b>
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>3.7</b>	<b>4.7</b>	<b>4.5</b>	<b>4.3</b>	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>19</b>	<b>19</b>	<b>18</b>	<b>18</b>	<b>3.5</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	<b>52</b>	<b>53</b>	<b>50</b>	<b>48</b>	<b>0.58J</b>
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U
Parameter	MCL	MW23-1-GW@8'	MW23-2-GW@45'	MW23-2-GW@55'	MW23-2-GW@65'	MW24-2-GW@127'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>19</b>	<b>0.77J</b>	<b>0.8J</b>	<b>0.75J</b>	<b>4</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	<b>3.6</b>	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	<b>1.1</b>	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHENE	7	<b>29</b>	<b>1.4</b>	<b>1.6</b>	<b>1.4</b>	<b>3.4</b>
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>5.2J-L</b>	3U-R	3U-R	3U-R	<b>7.1J</b>
ACETONE	N/A	<b>8J-J</b>	<b>5J-J</b>	<b>4.9J-J</b>	<b>5.7J-J</b>	<b>8.8J-J</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	<b>0.8J</b>	0.3U	0.3U	0.3U	<b>0.4J</b>
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>13</b>	<b>0.32J</b>	0.3U	0.3U	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>2.8</b>	<b>0.42J</b>	<b>0.4J</b>	<b>0.34J</b>	<b>1.4</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>19</b>	<b>1.3</b>	<b>0.74J</b>	<b>0.72J</b>	<b>1.1</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	<b>52</b>	<b>2.6</b>	<b>3</b>	<b>2.5</b>	<b>5.3</b>
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U
Parameter	MCL	MW23-3-GW@103'	MW23-3-GW@113'	MW23-3-GW@113' DUP	MW23-3-GW@83'	MW24-2-GW@67'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>0.3U</b>	<b>0.3U</b>	<b>0.3U</b>	<b>0.3U</b>	<b>11</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHENE	7	0.3U	0.3U	0.3U	0.3U	<b>7.5</b>
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>3U-R</b>	3U-R	3U-R	3U-R	<b>8.1J</b>
ACETONE	N/A	<b>3U</b>	<b>3U</b>	<b>3U</b>	<b>3U</b>	<b>7.8J-J</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	<b>0.31J</b>	0.3U	<b>0.31J</b>	<b>0.31J</b>	<b>0.4J</b>
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>0.33J</b>	<b>0.32J</b>	<b>0.36J</b>	<b>0.35J</b>	<b>0.97J</b>
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	0.3U	0.3U	0.3U	<b>1.4</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>3.4</b>	<b>3.5</b>	<b>4.2</b>	<b>3.5</b>	<b>3.5</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	<b>0.59J</b>	<b>0.61J</b>	<b>0.66J</b>	<b>0.64J</b>	<b>12</b>
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

N/A - Not Applicable

#### Laboratory Data Qualifiers

(stand to the left of dash, or alone. e.g. "U-D", or "N")

B. Estimated value. Analyte detected below the RL, but above the MDL.

E. Value above upper calibration range.

J. Estimated concentration.

U. Parameter not detected above method detection limit.

#### Data Validation Qualifiers

(stand to the right of dash. e.g., "N-J", or "-B")

B. Analyte detected in associated method blank.

D. Result detected in sample with laboratory dilution.

J. Estimated concentration.

L. Indicates the reported value may be biased low.

R. Unreliable. Analyte concentration may not be accurate

UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-2. BARC 6 Biodegradable Site VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	MW24-1-GW@30'	MW24-2-GW@107'	MW24-2-GW@117'	MW24-2-GW@97'	MW25-1-GW@17'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	0.3U	<b>15</b>	<b>13</b>	<b>49</b>	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	0.3U	<b>0.5J</b>	0.3U
1,1-DICHLOROETHENE	7	0.3U	<b>8.6</b>	<b>7.9</b>	<b>20</b>	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>8.7J</b>	<b>5.1J</b>	<b>5.5J</b>	<b>8.2J</b>	<b>7.8J</b>
ACETONE	N/A	<b>8J-J</b>	<b>8.1J-J</b>	<b>8.7J-J</b>	<b>7.6J-J</b>	<b>9.6J-J</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	0.3U	<b>0.46J</b>	<b>0.43J</b>	<b>0.43J</b>	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U	<b>0.89J</b>	<b>0.84J</b>	<b>2.4</b>	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	<b>2.9</b>	<b>2.3</b>	<b>2.4</b>	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	0.2U	<b>3.1</b>	<b>3.2</b>	<b>6.4</b>	0.2U
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	0.3U	<b>14</b>	<b>12</b>	<b>33</b>	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

Parameter	MCL	MW24-2-GW@137'	MW24-2-GW@47'	MW24-2-GW@57'	MW25-1-GW@47'	MW25-1-GW@57'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>49</b>	<b>8.6</b>	<b>9.8</b>	0.3U	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.47J	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHENE	7	<b>20</b>	<b>4.5</b>	<b>6.2</b>	0.3U	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>6.5J</b>	<b>5.8J</b>	<b>5.5J</b>	<b>7.5J</b>	<b>6.4J</b>
ACETONE	N/A	<b>8.9J-J</b>	<b>8.6J-J</b>	<b>8.6J-J</b>	<b>9.6J-J</b>	<b>8.2J-J</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	<b>0.44J</b>	<b>0.38J</b>	<b>0.38J</b>	0.3U	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>2.5</b>	<b>0.71J</b>	<b>0.88J</b>	0.3U	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>2.1</b>	<b>1.1</b>	<b>1.2</b>	0.3U	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>6.6</b>	<b>2.5</b>	<b>3</b>	0.2U	0.2U
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	<b>31</b>	<b>7.8</b>	<b>10</b>	0.3U	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

Parameter	MCL	MW24-2-GW@77'	MW24-2-GW@87'	MW24-2-GW@87' DUP	MW25-2-GW@107'	MW25-2-GW@117'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>18</b>	<b>36</b>	<b>34</b>	<b>50</b>	<b>49</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	<b>0.4J</b>	<b>0.37J</b>	<b>0.47J</b>	<b>0.49J</b>
1,1-DICHLOROETHENE	7	<b>12</b>	<b>17</b>	<b>16</b>	<b>21</b>	<b>21</b>
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>9J</b>	<b>7.7J</b>	<b>7.8J</b>	<b>6.9J</b>	<b>8.8J</b>
ACETONE	N/A	<b>7.9J-J</b>	<b>6.6J-J</b>	<b>7.2J-J</b>	<b>7.8J-J</b>	<b>6.1J-J</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	<b>0.42J</b>	<b>0.43J</b>	<b>0.45J</b>	<b>0.46J</b>	<b>0.49J</b>
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>1.3</b>	<b>2</b>	<b>1.9</b>	<b>2.5</b>	<b>2.5</b>
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>1.6</b>	<b>2</b>	<b>2</b>	<b>2.3</b>	<b>2.2</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>4.4</b>	<b>5.8</b>	<b>5.6</b>	<b>6.8</b>	<b>6.7</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	<b>19</b>	<b>27</b>	<b>25</b>	<b>32</b>	<b>32</b>
TRICHLOROETHENE	2	0.3U	0.3U	0.3U	0.3U	0.3U

N/A - Not Applicable

#### Data Validation Qualifiers

- (stand to the right of dash, e.g., "U-D", or "N")
- B. Analyte detected in associated method blank.
- D. Result detected in sample with laboratory dilution.
- J. Estimated concentration.
- L. Indicates the reported value may be biased low.
- R. Unreliable. Analyte concentration may not be accurate
- UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-2. BARC 6 Biodegradable Site VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	MW25-1-GW@27'	MW25-1-GW@37'	MW25-2-GW@137'	MW25-2-GW@97'	MW2-GW@8_15'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	<b>0.3U</b>	<b>18</b>	<b>4.4</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	<b>0.37J</b>
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	0.3U	<b>0.34J</b>	1.2
1,1-DICHLOROETHENE	7	0.3U	0.3U	0.3U	<b>12</b>	5.4
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>8J</b>	<b>7.1J</b>	<b>6.9J</b>	<b>5.9J</b>	<b>4.1J-L</b>
ACETONE	N/A	<b>8.9J-J</b>	<b>8.9J-J</b>	<b>9J-J</b>	<b>9.5J-J</b>	<b>12-B</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	0.3U	0.3U	0.3U	<b>0.47J</b>	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U	0.3U	0.3U	<b>1</b>	<b>2.2</b>
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	0.3U	0.3U	<b>3.2</b>	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	0.2U	0.2U	0.2U	<b>3.7</b>	<b>1.6</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	<b>18</b>	<b>12</b>
TRICHLOROETHENE	5	0.3U	0.3U	0.3U	<b>18</b>	<b>12</b>
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

Parameter	MCL	MW25-1-GW@67'	MW25-1-GW@77'	MW4-GW@5_65'	MW4-GW@5_65' DUP	MW5-GW@103_5'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	<b>2.2</b>	<b>2.3</b>	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	<b>0.32J</b>	<b>0.36J</b>	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHENE	7	0.3U	<b>0.32J</b>	<b>4.8</b>	<b>4.8</b>	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>5.9J</b>	<b>5.5J</b>	<b>3.6J-L</b>	<b>3.6J-L</b>	3U-R
ACETONE	N/A	<b>8.3J-J</b>	<b>8.1J-J</b>	<b>8.8J-B</b>	<b>7.8J-B</b>	<b>7.1J-B</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	0.3U	0.3U	<b>0.33J</b>	0.3U	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U	0.3U	<b>0.54J</b>	<b>0.49J</b>	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	<b>0.86J</b>	<b>0.88J</b>	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	<b>0.34J</b>	0.3U	0.3U	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	0.2U	0.2U	<b>1.5</b>	<b>1.4</b>	0.2U
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	0.3U	<b>0.91J</b>	<b>9.5</b>	<b>9.5</b>	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

Parameter	MCL	MW25-2-GW@117' DUP	MW25-2-GW@127'	MW7-GW@34_5'	MW7-GW@34_5' DUP	MW8-GW@31_5'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	<b>13</b>	<b>49</b>	<b>26</b>	<b>28</b>	<b>1.2</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	<b>3.3</b>	<b>3.5</b>	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	<b>0.44J</b>	0.68J	0.71J	0.3U
1,1-DICHLOROETHENE	7	<b>8</b>	<b>20</b>	<b>21</b>	<b>23</b>	<b>1.3</b>
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>5.8J</b>	<b>6.6J</b>	3U-R	<b>3.9J-L</b>	3U-R
ACETONE	N/A	<b>8.8J-J</b>	<b>7.3J-J</b>	<b>10-B</b>	<b>7.2J-B</b>	<b>8.5J-B</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	<b>0.44J</b>	<b>0.45J</b>	<b>0.56J</b>	<b>0.63J</b>	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>0.84J</b>	<b>2.5</b>	<b>3.8</b>	<b>3.8</b>	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>2.4</b>	<b>2.3</b>	<b>1.6</b>	<b>1.6</b>	<b>0.3J</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>3.2</b>	<b>6.6</b>	<b>9.3</b>	<b>9.1</b>	<b>1.1-B</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	<b>13</b>	<b>32</b>	<b>39</b>	<b>40</b>	<b>2.4</b>
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

N/A - Not Applicable

#### Data Validation Qualifiers

- (stand to the right of dash, e.g., "U-D", or "N")
- B. Analyte detected in associated method blank.
- D. Result detected in sample with laboratory dilution.
- J. Estimated concentration.
- L. Indicates the reported value may be biased low.
- R. Unreliable. Analyte concentration may not be accurate
- UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-2. BARC 6 Biodegradable Site VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	MW3-GW@5_15'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U
1,1,1-TRICHLOROETHANE	200	<b>2.1</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U
1,1-DICHLOROETHANE	N/A	0.3U
1,1-DICHLOROETHENE	7	<b>3.3</b>
1,2-DICHLOROETHANE	5	0.3U
2-BUTANONE	N/A	<b>3.3J-L</b>
ACETONE	N/A	<b>7.3J-B</b>
BENZENE	5	0.3U
BROMOBENZENE	N/A	0.3U
CHLOROFORM	70	0.3U
CHLOROMETHANE	N/A	0.3U
CIS-1,2-DICHLOROETHENE	70	<b>0.54J</b>
DICHLORODIFLUOROMETHANE	N/A	<b>0.49J</b>
M+P-XYLENE	N/A	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U
METHYLENE CHLORIDE	5	0.43U
NAPHTHALENE	N/A	0.3U
TETRACHLOROETHENE	5	<b>0.97J-B</b>
TOLUENE	1000	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U
TRICHLOROETHENE	5	<b>7.6</b>
VINYL CHLORIDE	2	0.3U

Parameter	MCL	MW6-GW@13_05'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U
1,1,1-TRICHLOROETHANE	200	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U
1,1-DICHLOROETHANE	N/A	0.3U
1,1-DICHLOROETHENE	7	0.3U
1,2-DICHLOROETHANE	5	0.3U
2-BUTANONE	N/A	3U-R
ACETONE	N/A	<b>7.9J-B</b>
BENZENE	5	0.3U
BROMOBENZENE	N/A	0.3U
CHLOROFORM	70	0.3U
CHLOROMETHANE	N/A	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U
M+P-XYLENE	N/A	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U
METHYLENE CHLORIDE	5	0.43U
NAPHTHALENE	N/A	0.3U
TETRACHLOROETHENE	5	0.2U
TOLUENE	1000	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U
TRICHLOROETHENE	5	0.3U
VINYL CHLORIDE	2	0.3U

Parameter	MCL	MW9-GW@35'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U
1,1,1-TRICHLOROETHANE	200	<b>2.9</b>
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U
1,1-DICHLOROETHANE	N/A	0.3U
1,1-DICHLOROETHENE	7	<b>3.7</b>
1,2-DICHLOROETHANE	5	0.3U
2-BUTANONE	N/A	3U-R
ACETONE	N/A	<b>7.7J-B</b>
BENZENE	5	0.3U
BROMOBENZENE	N/A	0.3U
CHLOROFORM	70	0.3U
CHLOROMETHANE	N/A	0.3U
CIS-1,2-DICHLOROETHENE	70	0.39J
DICHLORODIFLUOROMETHANE	N/A	0.3U
M+P-XYLENE	N/A	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>0.6J</b>
METHYLENE CHLORIDE	5	0.43U
NAPHTHALENE	N/A	0.3U
TETRACHLOROETHENE	5	<b>1.2</b>
TOLUENE	1000	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U
TRICHLOROETHENE	5	<b>6.5</b>
VINYL CHLORIDE	2	0.3U

N/A - Not Applicable

#### Laboratory Data Qualifiers

(stand to the left of dash, or alone. e.g. "U-D", or "N")

B. Estimated value. Analyte detected below the RL, but above the MDL.

E. Value above upper calibration range.

J. Estimated concentration.

U. Parameter not detected above method detection limit.

#### Data Validation Qualifiers

(stand to the right of dash. e.g., "N-J", or "-B")

B. Analyte detected in associated method blank.

D. Result detected in sample with laboratory dilution.

J. Estimated concentration.

L. Indicates the reported value may be biased low.

R. Unreliable. Analyte concentration may not be accurate

UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-3. Ballard Offsite Monitoring Wells MCL Exceedances in Groundwater, March 2014

Parameter	Units	Frequency of Detection	Maximum Concentration	Maximum Sample ID	MCL	Maximum > MCL?	# Detections > MCL
1,1,1,2-TETRACHLOROETHANE	µg/L	5 / 33	0.87	AEC-OMW-10R-GW@52'	NA	NA	NA
1,1,1-TRICHLOROETHANE	µg/L	1 / 33	18	AEC-OMW-25-GW@37.5'	200	No	0
1,1-DICHLOROETHANE	µg/L	1 / 33	0.88	AEC-OMW-12-GW@40'	NA	NA	NA
1,1-DICHLOROETHENE	µg/L	1 / 33	24	AEC-OMW-25-GW@37.5'	7	Yes	1
2-BUTANONE	µg/L	32 / 33	21	AEC-OMW19-GW@41'	NA	No	0
ACETONE	µg/L	32 / 33	190	AEC-OMW-10R-GW@42'	NA	NA	NA
CHLOROFORM <sup>(1)</sup>	µg/L	21 / 33	1.4	AEC-OMW-22-GW@29'	70	No	0
CIS-1,2-DICHLOROETHENE	µg/L	13 / 33	9.1	AEC-OMW-5-GW@61.5'	70	No	0
METHYL TERTIARY BUTYL ETHER	µg/L	15 / 33	28	AEC-OMW-22-GW@29'	NA	NA	NA
TETRACHLOROETHENE	µg/L	24 / 33	1,400	AEC-OMW-10R-GW@52'	5	Yes	16
TRICHLOROETHENE	µg/L	17 / 33	210	AEC-OMW-22-GW@29'	5	Yes	5

**Abbreviations**

ug/L - Microgram per liter (equivalent to parts per billion)

MCL - Maximum contaminant Level

N/A - Not applicable. No established MCL.

**Notes**

1. Value shown is the MCLG for chloroform (70 µg/L)

Table A-4. Ballard Offsite Monitoring Wells VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	OMW10R-GW@42'	OMW10R-GW@42'RR1	OMW10R-GW@52'	OMW10R-GW@52' DUP	OMW15-GW@64'
1,1,1,2-TETRACHLOROETHANE	NA	15U-RD	<b>0.75-J</b>	15U-RD	15U-RD	0.3U
1,1,1-TRICHLOROETHANE	200	15U-RD	0.3U	15U-RD	15U-RD	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	15U-RD	0.3U	15U-RD	15U-RD	0.3U
1,1,2-TRICHLOROETHANE	5	15U-RD	0.3U	15U-RD	15U-RD	0.3U
1,1-DICHLOROETHANE	N/A	15U-RD	0.3U	15U-RD	15U-RD	0.3U
1,1-DICHLOROETHENE	7	15U-RD	0.3U	15U-RD	15U-RD	0.3U
1,2-DICHLOROETHANE	5	15U-RD	0.3U	15U-RD	15U-RD	0.3U
2-BUTANONE	N/A	150U-RD	<b>19-J</b>	150U-RD	150U-RD	<b>9.2-J</b>
ACETONE	N/A	<b>190J-RD</b>	<b>45-L</b>	<b>160J-RD</b>	<b>180J-RD</b>	<b>8.5J-L</b>
BENZENE	5	15U-RD	0.3U	15U-RD	15U-RD	0.3U
BROMOBENZENE	N/A	15U-RD	0.3U	15U-RD	15U-RD	0.3U
CHLOROFORM	70	15U-RD	<b>0.88J-J</b>	15U-RD	15U-RD	<b>0.53-J</b>
CHLOROMETHANE	N/A	15U-RD	0.3U	15U-RD	15U-RD	0.3U
CIS-1,2-DICHLOROETHENE	70	15U-RD	<b>1.5-J</b>	15U-RD	15U-RD	0.3U
DICHLORODIFLUOROMETHANE	N/A	15U-RD	0.3U	15U-RD	15U-RD	0.3U
M+P-XYLENE	N/A	15U-RD	0.3U	15U-RD	15U-RD	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	15U-RD	<b>2-J</b>	15U-RD	15U-RD	<b>0.31-J</b>
METHYLENE CHLORIDE	5	22U-RD	0.43U	22U-RD	22U-RD	0.43U
NAPHTHALENE	N/A	15U-RD	0.3U	15U-RD	15U-RD	0.3U
TETRACHLOROETHENE	5	<b>1400-D</b>	<b>730E-R</b>	<b>1300-D</b>	<b>1400-D</b>	<b>0.2-J</b>
TOLUENE	1000	15U-RD	0.3U	15U-RD	15U-RD	0.3U
TRANS-1,2-DICHLOROETHENE	5	15U-RD	0.3U	15U-RD	15U-RD	0.3U
TRICHLOROETHENE	5	15U-RD	<b>1.6-J</b>	15U-RD	15U-RD	0.3U
VINYL CHLORIDE	2	15U-RD	0.3U	15U-RD	15U-RD	0.3U

Parameter	MCL	OMW10R-GW@52' DUPRR1	OMW10R-GW@52'RR1	OMW10R-GW@62'	OMW10R-GW@62'RR1	OMW1-GW@39'
1,1,1,2-TETRACHLOROETHANE	NA	<b>0.87J-J</b>	<b>0.87J-J</b>	15U-RD	<b>0.72J-J</b>	15U-RD
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	15U-RD	0.3U	15U-RD
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	15U-RD	0.3U	15U-RD
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	15U-RD	0.3U	15U-RD
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	15U-RD	0.3U	15U-RD
1,1-DICHLOROETHENE	7	0.3U	0.3U	15U-RD	0.3U	15U-RD
1,2-DICHLOROETHANE	5	0.3U	0.3U	15U-RD	0.3U	15U-RD
2-BUTANONE	N/A	<b>20-J</b>	<b>19-J</b>	150U-RD	<b>20-J</b>	150U-RD
ACETONE	N/A	<b>50-L</b>	<b>51</b>	<b>180J-RD</b>	<b>43-L</b>	150U-RD
BENZENE	5	0.3U	0.3U	15U-RD	0.3U	15U-RD
BROMOBENZENE	N/A	0.3U	0.3U	15U-RD	0.3U	15U-RD
CHLOROFORM	70	<b>0.77J-J</b>	<b>0.76J-J</b>	15U-RD	<b>0.76J-J</b>	15U-RD
CHLOROMETHANE	N/A	0.3U	0.3U	15U-RD	0.3U	15U-RD
CIS-1,2-DICHLOROETHENE	70	<b>3.3-J</b>	<b>3.1-J</b>	15U-RD	3.3-J	15U-RD
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	15U-RD	0.3U	15U-RD
M+P-XYLENE	N/A	0.3U	0.3U	15U-RD	0.3U	15U-RD
METHYL TERTIARY BUTYL ETHER	N/A	<b>1-J</b>	<b>1-J</b>	15U-RD	0.99J-J	15U-RD
METHYLENE CHLORIDE	5	0.43U	0.43U	22U-RD	0.43U	22U-RD
NAPHTHALENE	N/A	0.3U	0.3U	15U-RD	0.3U	15U-RD
TETRACHLOROETHENE	5	<b>760E-R</b>	<b>710E-R</b>	<b>1300-D</b>	<b>660E-R</b>	<b>990-D</b>
TOLUENE	1000	0.3U	0.3U	15U-RD	0.3U	15U-RD
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	15U-RD	0.3U	15U-RD
TRICHLOROETHENE	5	<b>1.6-J</b>	<b>1.5-J</b>	15U-RD	<b>1.4-J</b>	15U-RD
VINYL CHLORIDE	2	0.3U	0.3U	15U-RD	0.3U	15U-RD

Parameter	MCL	OMW11-GW@46_5'	OMW11-GW@46_5'RR1	OMW14-GW@43'	OMW15-GW@54'	OMW22-GW@29'RR1
1,1,1,2-TETRACHLOROETHANE	NA	3U-RD	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	3U-RD	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	3U-RD	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	3U-RD	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	3U-RD	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHENE	7	3U-RD	0.3U	0.3U	0.3U	0.3U
1,2-DICHLOROETHANE	5	3U-RD	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	30U-RD	<b>21-J</b>	<b>5.5J-J</b>	<b>7.4J-J</b>	<b>4.5J-J</b>
ACETONE	N/A	<b>75J-RD</b>	<b>48-L</b>	<b>8.3J-L</b>	<b>8.2J-L</b>	<b>12-L</b>
BENZENE	5	3U-RD	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	3U-RD	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	3U-RD	<b>0.54J-J</b>	<b>0.57J-J</b>	<b>0.54J-J</b>	<b>1.4-J</b>
CHLOROMETHANE	N/A	3U-RD	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	3U-RD	0.3U	0.3U	0.3U	2.5-J
DICHLORODIFLUOROMETHANE	N/A	3U-RD	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	3U-RD	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	3U-RD	<b>0.34J-J</b>	0.38J-J	<b>0.37J-J</b>	<b>28</b>
METHYLENE CHLORIDE	5	4.3U-RD	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	3U-RD	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>170-D</b>	<b>160E-R</b>	<b>2.7-J</b>	0.2U	<b>360E-R</b>
TOLUENE	1000	3U-RD	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	3U-RD	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	3U-RD	0.3U	<b>0.44J-J</b>	0.3U	<b>210E-R</b>
VINYL CHLORIDE	2	3U-RD	0.3U	0.3U	0.3U	0.3U

N/A - Not Applicable

#### Data Validation Qualifiers

- (stand to the right of dash, e.g., "N-J", or "-B")
- B. Analyte detected in associated method blank.
- D. Result detected in sample with laboratory dilution.
- J. Estimated concentration.
- L. Indicates the reported value may be biased low.
- R. Unreliable. Analyte concentration may not be accurate
- UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-4. Ballard Offsite Monitoring Wells VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	OMW17-GW@45'	OMW18-GW@41'	OMW19-GW@41'	OMW22-GW@49'RR1	OMW22-GW@69'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
1,1-DICHLOROETHENE	7	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	0.3U	0.3U	0.3U
2-BUTANONE	N/A	<b>7.2J-J</b>	<b>11-J</b>	<b>21-J</b>	<b>4.5J-J</b>	<b>6.3J-J</b>
ACETONE	N/A	<b>10-L</b>	<b>8J-L</b>	<b>40-L</b>	<b>10-L</b>	<b>22-L</b>
BENZENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CHLOROFORM	70	0.3U	0.3U	<b>0.81J-J</b>	<b>0.81J-J</b>	0.3U
CHLOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U	0.3U	0.3U	<b>1.4-J</b>	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>1.1-J</b>	0.3U	<b>1.3-J</b>	<b>19</b>	<b>0.37J-J</b>
METHYLENE CHLORIDE	5	0.43U	0.43U	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>0.57J-J</b>	<b>0.21J-J</b>	<b>0.26J-J</b>	<b>250E-R</b>	<b>11</b>
TOLUENE	1000	0.3U	0.3U	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	0.3U	0.3U	<b>3.1-J</b>	<b>130E-R</b>	<b>2.8-J</b>
VINYL CHLORIDE	2	0.3U	0.3U	0.3U	0.3U	0.3U

Parameter	MCL	OMW1-GW@39'RR1	OMW21-GW@38'	OMW22-GW@29'	OMW25-GW@37.5'	OMW26-GW@40'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	7.5U-RD	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	7.5U-RD	<b>18</b>	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	7.5U-RD	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	7.5U-RD	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	7.5U-RD	<b>0.88J-J</b>	0.3U
1,1-DICHLOROETHENE	7	0.3U	0.3U	7.5U-RD	<b>24</b>	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	7.5U-RD	0.3U	0.3U
2-BUTANONE	N/A	<b>18-J</b>	<b>6.6J-J</b>	<b>75U-RD</b>	<b>5.3J-J</b>	3U
ACETONE	N/A	<b>43-L</b>	<b>8.3J-L</b>	<b>75U-RD</b>	<b>8.1J-L</b>	<b>3U-UL</b>
BENZENE	5	0.3U	0.3U	7.5U-RD	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	7.5U-RD	0.3U	0.3U
CHLOROFORM	70	<b>0.57J-J</b>	0.3U	7.5U-RD	<b>0.56J-J</b>	<b>0.38J-J</b>
CHLOROMETHANE	N/A	0.3U	0.3U	7.5U-RD	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	0.4J-J	0.3U	7.5U-RD	<b>6.4</b>	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	7.5U-RD	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	7.5U-RD	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	0.3U	<b>24J-RD</b>	<b>2.7-J</b>	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	11U-RD	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	7.5U-RD	0.3U	0.3U
TETRACHLOROETHENE	5	<b>620E-R</b>	<b>0.21J-J</b>	<b>420-D</b>	<b>11</b>	0.2U
TOLUENE	1000	0.3U	0.3U	7.5U-RD	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	7.5U-RD	0.3U	0.3U
TRICHLOROETHENE	5	<b>0.33J-J</b>	0.3U	<b>180-D</b>	<b>40</b>	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	7.5U-RD	0.3U	0.3U

Parameter	MCL	OMW22-GW@49'	OMW22-GW@49' DUP	OMW22-GW@49' DUPRR1	OMW28-GW@27'	OMW28-GW@37'
1,1,1,2-TETRACHLOROETHANE	NA	3U-RD	3U-RD	0.3U	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	3U-RD	3U-RD	0.3U	0.3U	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	3U-RD	3U-RD	0.3U	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	3U-RD	3U-RD	0.3U	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	3U-RD	3U-RD	0.3U	0.3U	0.3U
1,1-DICHLOROETHENE	7	3U-RD	3U-RD	0.3U	0.3U	0.3U
1,2-DICHLOROETHANE	5	3U-RD	3U-RD	0.3U	0.3U	0.3U
2-BUTANONE	N/A	30U-RD	30U-RD	<b>5J-J</b>	<b>10-J</b>	<b>11-J</b>
ACETONE	N/A	30U-RD	30U-RD	<b>11-L</b>	<b>8.4J-L</b>	<b>9.2J-L</b>
BENZENE	5	3U-RD	3U-RD	0.3U	0.3U	0.3U
BROMOBENZENE	N/A	3U-RD	3U-RD	0.3U	0.3U	0.3U
CHLOROFORM	70	3U-RD	3U-RD	<b>0.8J-J</b>	0.3U	0.3U
CHLOROMETHANE	N/A	3U-RD	3U-RD	0.3U	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	3U-RD	3U-RD	<b>1.3-J</b>	0.3U	0.3U
DICHLORODIFLUOROMETHANE	N/A	3U-RD	3U-RD	0.3U	0.3U	0.3U
M+P-XYLENE	N/A	3U-RD	3U-RD	0.3U	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	<b>17-RD</b>	18-RD	<b>19</b>	0.3U	0.3U
METHYLENE CHLORIDE	5	4.3U-RD	4.3U-RD	0.43U	0.43U	0.43U
NAPHTHALENE	N/A	3U-RD	3U-RD	0.3U	0.3U	0.3U
TETRACHLOROETHENE	5	<b>290-D</b>	<b>250-D</b>	<b>260E-R</b>	0.2U	0.2U
TOLUENE	1000	3U-RD	3U-RD	0.3U	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	3U-RD	3U-RD	0.3U	0.3U	0.3U
TRICHLOROETHENE	5	<b>110-D</b>	<b>110-D</b>	<b>130E-R</b>	0.3U	0.3U
VINYL CHLORIDE	2	3U-RD	3U-RD	0.3U	0.3U	0.3U

N/A - Not Applicable

#### Laboratory Data Qualifiers

(stand to the left of dash, or alone. e.g. "U-D", or "N")

B. Estimated value. Analyte detected below the RL, but above the MDL.

E. Value above upper calibration range.

J. Estimated concentration.

U. Parameter not detected above method detection limit.

#### Data Validation Qualifiers

(stand to the right of dash. e.g., "N-J", or "-B")

B. Analyte detected in associated method blank.

D. Result detected in sample with laboratory dilution.

J. Estimated concentration.

L. Indicates the reported value may be biased low.

R. Unreliable. Analyte concentration may not be accurate

UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-4. Ballard Offsite Monitoring Wells VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	OMW23-GW@40'	OMW24-GW@40'	OMW2-GW@38'	OMW2-GW@38' DUP	OMW2-GW@38' DUPRR1
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	3U-RD	3U-RD	0.3U
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	3U-RD	3U-RD	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	3U-RD	3U-RD	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	3U-RD	3U-RD	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	3U-RD	3U-RD	0.3U
1,1-DICHLOROETHENE	7	0.3U	0.3U	3U-RD	3U-RD	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	3U-RD	3U-RD	0.3U
2-BUTANONE	N/A	<b>5.7J-J</b>	<b>6.3J-J</b>	30U-RD	30U-RD	<b>3.4J-J</b>
ACETONE	N/A	<b>8.7J-L</b>	<b>8.1J-L</b>	30U-RD	38J-RD	<b>8.6J-L</b>
BENZENE	5	0.3U	0.3U	3U-RD	3U-RD	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	3U-RD	3U-RD	0.3U
CHLOROFORM	70	0.3U	0.3U	3U-RD	3U-RD	<b>0.65J-J</b>
CHLOROMETHANE	N/A	0.3U	0.3U	3U-RD	3U-RD	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U	0.3U	3U-RD	3U-RD	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	3U-RD	3U-RD	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	3U-RD	3U-RD	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	0.3U	3U-RD	3U-RD	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	4.3U-RD	4.3U-RD	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	3U-RD	3U-RD	0.3U
TETRACHLOROETHENE	5	<b>2.8-J</b>	0.2U	<b>200-D</b>	<b>210-D</b>	<b>210E-R</b>
TOLUENE	1000	0.3U	0.3U	3U-RD	3U-RD	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	3U-RD	3U-RD	0.3U
TRICHLOROETHENE	5	0.3U	0.3U	3U-RD	3U-RD	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	3U-RD	3U-RD	0.3U

Parameter	MCL	OMW27-GW@40'	OMW28-GW@17'	OMW3-GW@34'	OMW3-GW@34'RR1	OMW5-GW@61_5'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
1,1-DICHLOROETHENE	7	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
1,2-DICHLOROETHANE	5	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
2-BUTANONE	N/A	<b>6J-J</b>	<b>13</b>	30U-RD	<b>20-J</b>	75U-RD
ACETONE	N/A	<b>8.7J-L</b>	<b>7.6J-L</b>	<b>82J-RD</b>	<b>54</b>	76J-RD
BENZENE	5	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
BROMOBENZENE	N/A	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
CHLOROFORM	70	0.3U	0.3U	3U-RD	<b>0.43J-J</b>	7.5U-RD
CHLOROMETHANE	N/A	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
CIS-1,2-DICHLOROETHENE	70	0.3U	0.3U	3U-RD	<b>0.45J-J</b>	7.5U-RD
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
M+P-XYLENE	N/A	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
METHYLENE CHLORIDE	5	0.43U	0.43U	4.3U-RD	0.43U	11U-RD
NAPHTHALENE	N/A	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
TETRACHLOROETHENE	5	0.2U	0.2U	<b>76-D</b>	<b>75E-R</b>	<b>360-D</b>
TOLUENE	1000	0.3U	0.3U	3U-RD	0.3U	7.5U-RD
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	3U-RD	<b>0.44J-J</b>	7.5U-RD
TRICHLOROETHENE	5	0.3U	0.3U	3U-RD		7.5U-RD
VINYL CHLORIDE	2	0.3U	0.3U	3U-RD	0.3U	7.5U-RD

Parameter	MCL	OMW28-GW@47'	OMW28-GW@57'	OMW6-GW@36_5'	OMW6-GW@36_5'RR1	OMW7-GW@43'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	3U-RD	0.3U	0.3U
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	3U-RD	0.3U	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	3U-RD	0.3U	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	3U-RD	0.3U	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	3U-RD	0.3U	0.3U
1,1-DICHLOROETHENE	7	0.3U	0.3U	3U-RD	0.3U	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	3U-RD	0.3U	0.3U
2-BUTANONE	N/A	<b>11-J</b>	<b>10-J</b>	30U-RD	<b>14-J</b>	<b>5.5J-J</b>
ACETONE	N/A	<b>8.4J-L</b>	<b>11-L</b>	70J-RD	<b>45-L</b>	<b>11-L</b>
BENZENE	5	0.3U	0.3U	3U-RD	0.3U	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	3U-RD	0.3U	0.3U
CHLOROFORM	70	0.3U	0.3U	3U-RD	<b>0.36J-J</b>	<b>0.53J-J</b>
CHLOROMETHANE	N/A	0.3U	0.3U	3U-RD	0.3U	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U	0.3U	<b>5.6J-RD</b>	<b>6.9</b>	0.3U
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	3U-RD	0.3U	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	3U-RD	0.3U	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	0.3U	3U-RD	<b>0.91J-J</b>	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	4.3U-RD	0.43U	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	3U-RD	0.3U	0.3U
TETRACHLOROETHENE	5	0.2U	0.2U	<b>160-D</b>	<b>150E-R</b>	<b>0.45J-J</b>
TOLUENE	1000	0.3U	0.3U	3U-RD	0.3U	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	3U-RD	0.3U	0.3U
TRICHLOROETHENE	5	0.3U	0.3U	<b>17-RD</b>	<b>18</b>	0.3U
VINYL CHLORIDE	2	0.3U	0.3U	3U-RD	0.3U	0.3U

N/A - Not Applicable

#### Laboratory Data Qualifiers

(stand to the left of dash, or alone. e.g. "U-D", or "N")

B. Estimated value. Analyte detected below the RL, but above the MDL.

E. Value above upper calibration range.

J. Estimated concentration.

U. Parameter not detected above method detection limit.

#### Data Validation Qualifiers

(stand to the right of dash, e.g., "N-J", or "-B")

B. Analyte detected in associated method blank.

D. Result detected in sample with laboratory dilution.

J. Estimated concentration.

L. Indicates the reported value may be biased low.

R. Unreliable. Analyte concentration may not be accurate

UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-4. Ballard Offsite Monitoring Wells VOCs Detected in Groundwater, March 2014  
Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	MCL	OMW2-GW@38'RR1	OMW9R-GW@41'RR1	OMW9R-GW@51'	OMW9R-GW@51'RR1
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	<b>0.35J-J</b>	7.5U-RD	<b>0.39J-J</b>
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	7.5U-RD	0.3U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	7.5U-RD	0.3U
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	7.5U-RD	0.3U
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	7.5U-RD	0.3U
1,1-DICHLOROETHENE	7	0.3U	0.3U	7.5U-RD	0.3U
1,2-DICHLOROETHANE	5	0.3U	0.3U	7.5U-RD	0.3U
2-BUTANONE	N/A	<b>4.1J-J</b>	<b>19-J</b>	7.5U-RD	<b>19-J</b>
ACETONE	N/A	<b>8.9J-L</b>	<b>47-L</b>	7.5U-RD	<b>51</b>
BENZENE	5	0.3U	0.3U	7.5U-RD	0.3U
BROMOBENZENE	N/A	0.3U	0.3U	7.5U-RD	0.3U
CHLOROFORM	70	<b>0.62J-J</b>	<b>0.54J-J</b>	7.5U-RD	<b>0.56J-J</b>
CHLOROMETHANE	N/A	0.3U	0.3U	7.5U-RD	0.3U
CIS-1,2-DICHLOROETHENE	70	0.3U	1.6-J	7.5U-RD	<b>1.7-J</b>
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	7.5U-RD	0.3U
M+P-XYLENE	N/A	0.3U	0.3U	7.5U-RD	0.3U
METHYL TERTIARY BUTYL ETHER	N/A	0.3U	0.3U	7.5U-RD	0.3U
METHYLENE CHLORIDE	5	0.43U	0.43U	11U-RD	0.43U
NAPHTHALENE	N/A	0.3U	0.3U	7.5U-RD	0.3U
TETRACHLOROETHENE	5	<b>200E-R</b>	<b>490E-R</b>	<b>670-D</b>	<b>480E-R</b>
TOLUENE	1000	0.3U	0.3U	7.5U-RD	0.3U
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	7.5U-RD	0.3U
TRICHLOROETHENE	5	<b>0.51J-J</b>	<b>0.77J-J</b>	7.5U-RD	<b>0.68J-J</b>
VINYL CHLORIDE	2	0.3U	0.3U	7.5U-RD	0.3U

Parameter	MCL	OMW5-GW@61_5'RR1	OMW9R-GW@61'RR1	OMW9R-GW@61'
1,1,1,2-TETRACHLOROETHANE	NA	0.3U	0.3U	7.5U-RD
1,1,1-TRICHLOROETHANE	200	0.3U	0.3U	7.5U-RD
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	0.3U	0.3U	7.5U-RD
1,1,2-TRICHLOROETHANE	5	0.3U	0.3U	7.5U-RD
1,1-DICHLOROETHANE	N/A	0.3U	0.3U	7.5U-RD
1,1-DICHLOROETHENE	7	0.3U	0.3U	7.5U-RD
1,2-DICHLOROETHANE	5	0.3U	0.3U	7.5U-RD
2-BUTANONE	N/A	<b>11-J</b>	<b>19-J</b>	7.5U-RD
ACETONE	N/A	<b>52</b>	<b>48-L</b>	7.5U-RD
BENZENE	5	0.3U	0.3U	7.5U-RD
BROMOBENZENE	N/A	0.3U	0.3U	7.5U-RD
CHLOROFORM	70	<b>0.6J-J</b>	<b>0.54J-J</b>	7.5U-RD
CHLOROMETHANE	N/A	0.3U	0.3U	7.5U-RD
CIS-1,2-DICHLOROETHENE	70	<b>9.1</b>	<b>1.3-J</b>	7.5U-RD
DICHLORODIFLUOROMETHANE	N/A	0.3U	0.3U	7.5U-RD
M+P-XYLENE	N/A	0.3U	0.3U	7.5U-RD
METHYL TERTIARY BUTYL ETHER	N/A	<b>0.33J-J</b>	0.3U	7.5U-RD
METHYLENE CHLORIDE	5	0.43U	0.43U	11U-RD
NAPHTHALENE	N/A	0.3U	0.3U	7.5U-RD
TETRACHLOROETHENE	5	<b>310E-R</b>	<b>380E-R</b>	<b>490-D</b>
TOLUENE	1000	0.3U	0.3U	7.5U-RD
TRANS-1,2-DICHLOROETHENE	5	0.3U	0.3U	7.5U-RD
TRICHLOROETHENE	5	<b>5.9</b>	<b>0.83J-J</b>	7.5U-RD
VINYL CHLORIDE	2	0.3U	0.3U	7.5U-RD

Parameter	MCL	OMW9R-GW@41'
1,1,1,2-TETRACHLOROETHANE	NA	7.5U-RD
1,1,1-TRICHLOROETHANE	200	7.5U-RD
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	N/A	7.5U-RD
1,1,2-TRICHLOROETHANE	5	7.5U-RD
1,1-DICHLOROETHANE	N/A	7.5U-RD
1,1-DICHLOROETHENE	7	7.5U-RD
1,2-DICHLOROETHANE	5	7.5U-RD
2-BUTANONE	N/A	7.5U-RD
ACETONE	N/A	7.5U-RD
BENZENE	5	7.5U-RD
BROMOBENZENE	N/A	7.5U-RD
CHLOROFORM	70	7.5U-RD
CHLOROMETHANE	N/A	7.5U-RD
CIS-1,2-DICHLOROETHENE	70	7.5U-RD
DICHLORODIFLUOROMETHANE	N/A	7.5U-RD
M+P-XYLENE	N/A	7.5U-RD
METHYL TERTIARY BUTYL ETHER	N/A	7.5U-RD
METHYLENE CHLORIDE	5	11U-RD
NAPHTHALENE	N/A	7.5U-RD
TETRACHLOROETHENE	5	<b>660-D</b>
TOLUENE	1000	7.5U-RD
TRANS-1,2-DICHLOROETHENE	5	7.5U-RD
TRICHLOROETHENE	5	7.5U-RD
VINYL CHLORIDE	2	7.5U-RD

N/A - Not Applicable

#### Laboratory Data Qualifiers

(stand to the left of dash, or alone. e.g. "U-D", or "N")

B. Estimated value. Analyte detected below the RL, but above the MDL.

E. Value above upper calibration range.

J. Estimated concentration.

U. Parameter not detected above method detection limit.

#### Data Validation Qualifiers

(stand to the right of dash. e.g., "N-J", or "-B")

B. Analyte detected in associated method blank.

D. Result detected in sample with laboratory dilution.

J. Estimated concentration.

L. Indicates the reported value may be biased low.

R. Unreliable. Analyte concentration may not be accurate

UJ. Not detected; quantitation limit may be inaccurate or imprecise.

Table A-5. BARC 6 Biodegradable Site AWQC Exceedances in Surface Water, March 2014

Parameter	Units	Frequency of Detection	Maximum Concentration	Maximum Sample ID	AWQC <sup>(1)</sup>	Maximum > AWQC?	# Detections > AWQC
CHLOROFORM	µg/L	1 / 5	0.50	BA6-SW5	5.7	No	0
TETRACHLOROETHENE	µg/L	5 / 5	1.5	BA6-SW3	0.69	Yes	3
TRICHLOROETHENE	µg/L	2 / 5	0.50	BA6-SW3	2.5	No	0

**Abbreviations**

AWQC - Ambient Water Quality Criteria, EPA 2014. <http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm> May 2014.

ug/L - micrograms per liter

NA - Not Applicable. No AWQC established.

Table A-6. BARC 6 Biodegradable Site VOCs Detected in Surface Water, March 2014  
 Detections in Bold. SWDA MCL Exceedances highlighted in gray

Parameter	AWQC	BA6-SW1	BA6-SW2	BA6-SW2-DUP	BA6-SW3	BA6-SW4	BA6-SW5
CHLOROFORM	5.7	0.20U	0.20U	0.20U	0.20U	0.20U	0.63J
TETRACHLOROETHENE	0.69	<b>0.32J</b>	<b>0.88J</b>	<b>0.89J</b>	<b>1.6</b>	<b>1.3</b>	<b>0.46J</b>
TRICHLOROETHENE	2.5	0.30U	0.30U	<b>0.33J</b>	<b>0.34J</b>	<b>0.37J</b>	0.30U

#### Abbreviations

AWQC - Ambient Water Quality Criteria, EPA 2014.

<http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm> May 2014.

MDL = Method Detection Limit

NA - Not Applicable. No MCL established.

#### Notes

Values reported in ug/L

#### Laboratory Data Qualifiers

(stand to the left of dash, or alone. e.g. "U-D", or "N")

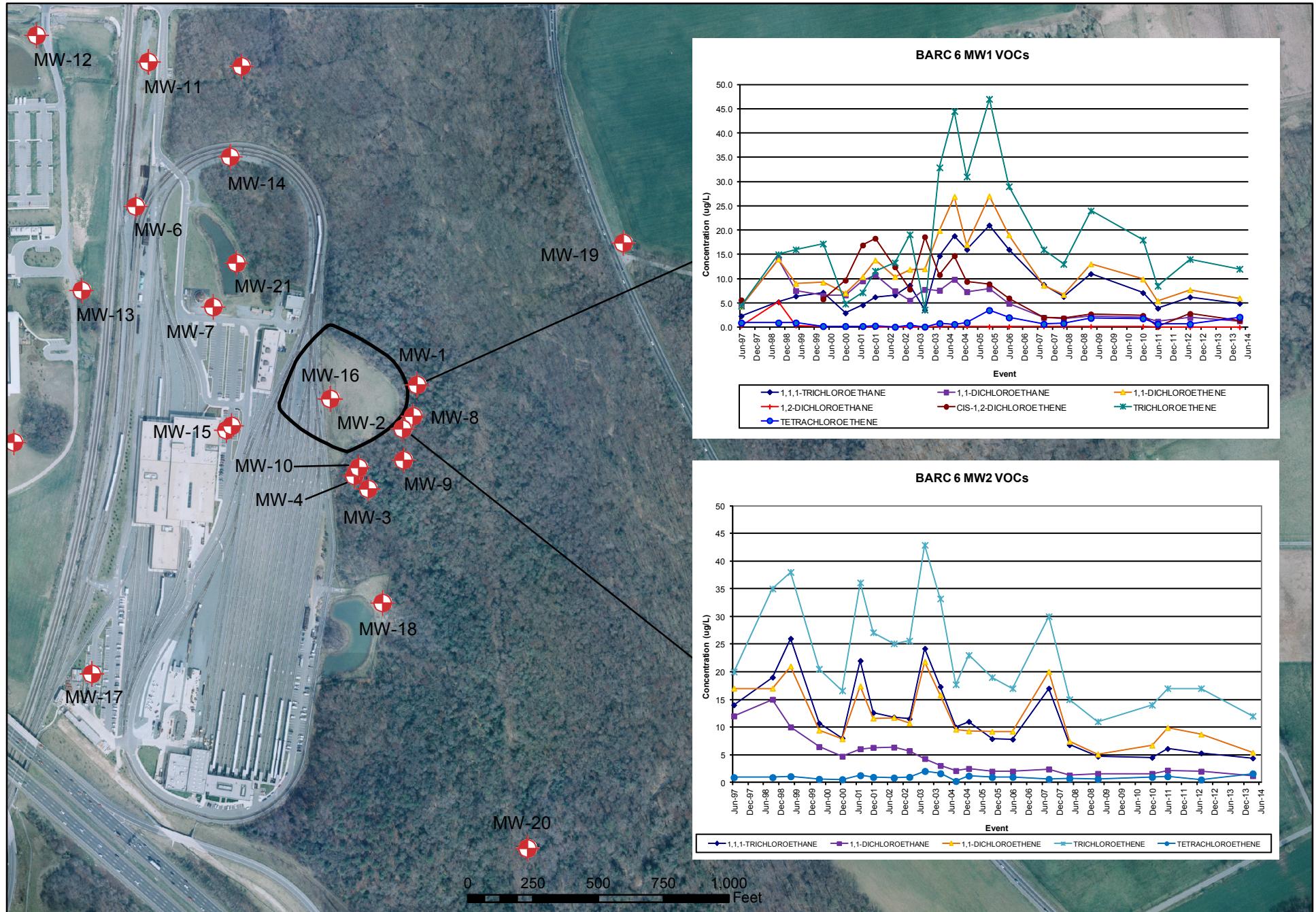
J. (Organics only) Estimated concentration.

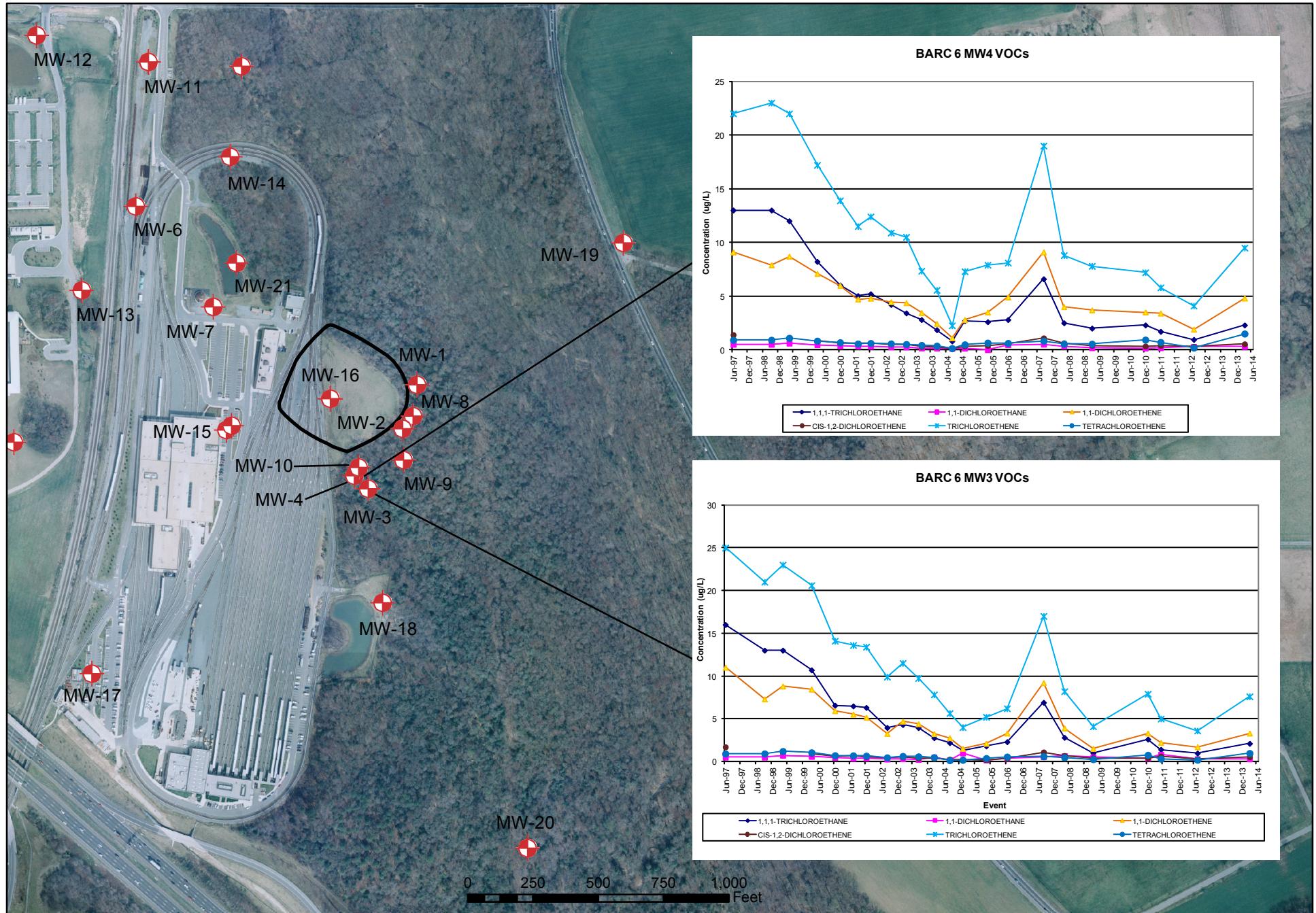
U. Parameter not detected above method detection limit.

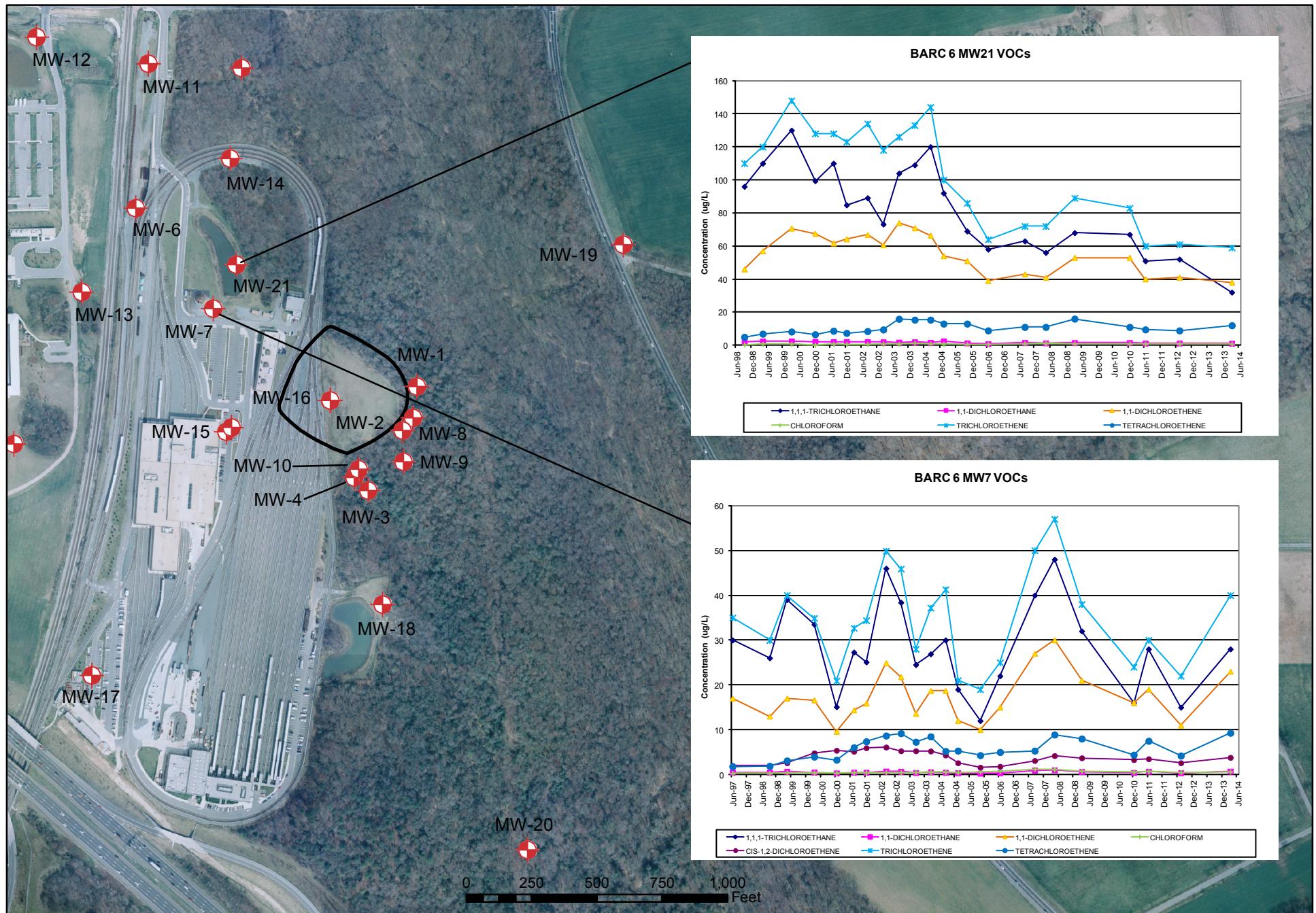
B. (Inorganics only) Estimated concentration.

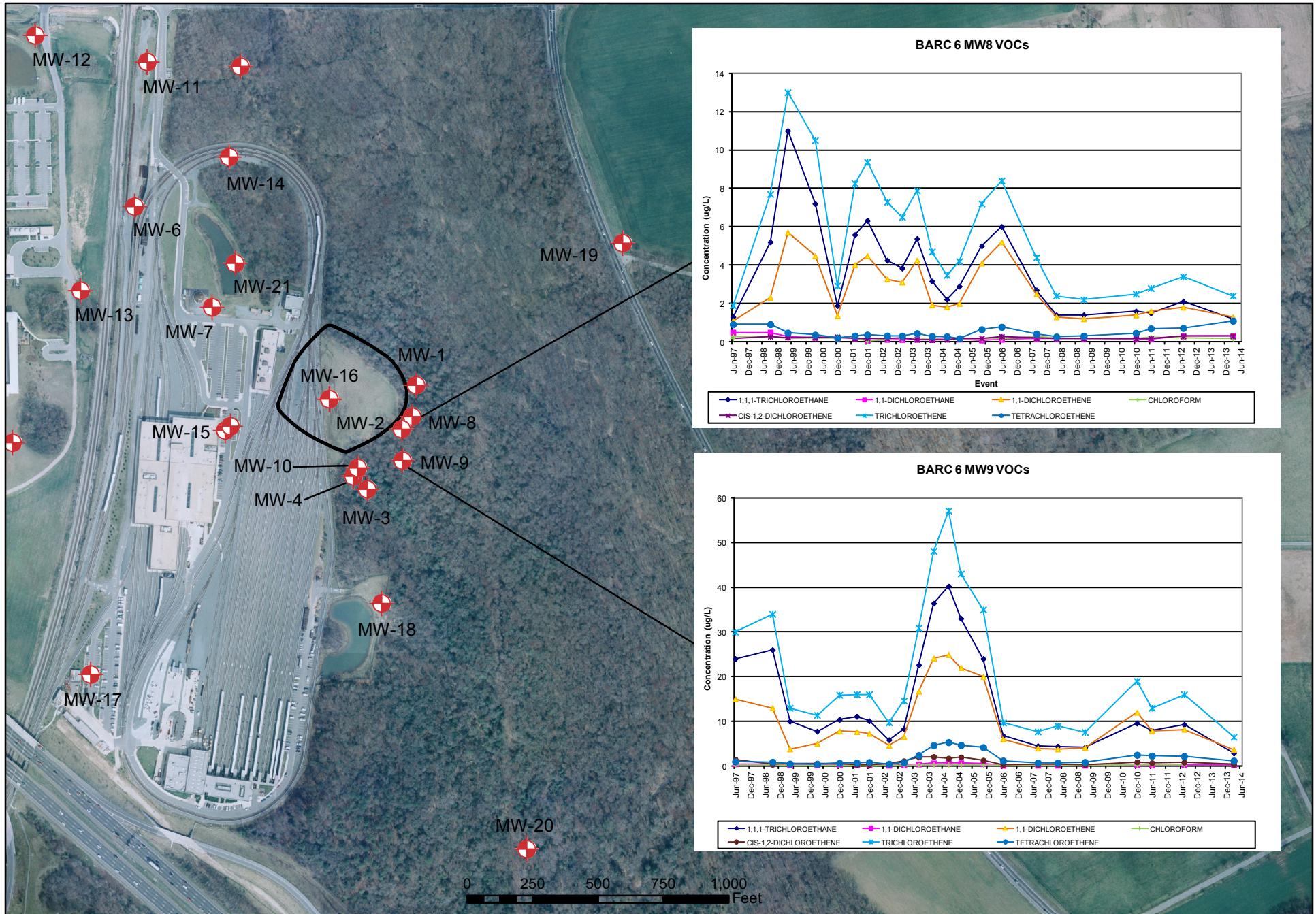
**ATTACHMENT B**

**COC Concentration Trend Graphs**

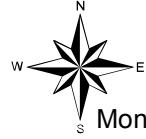
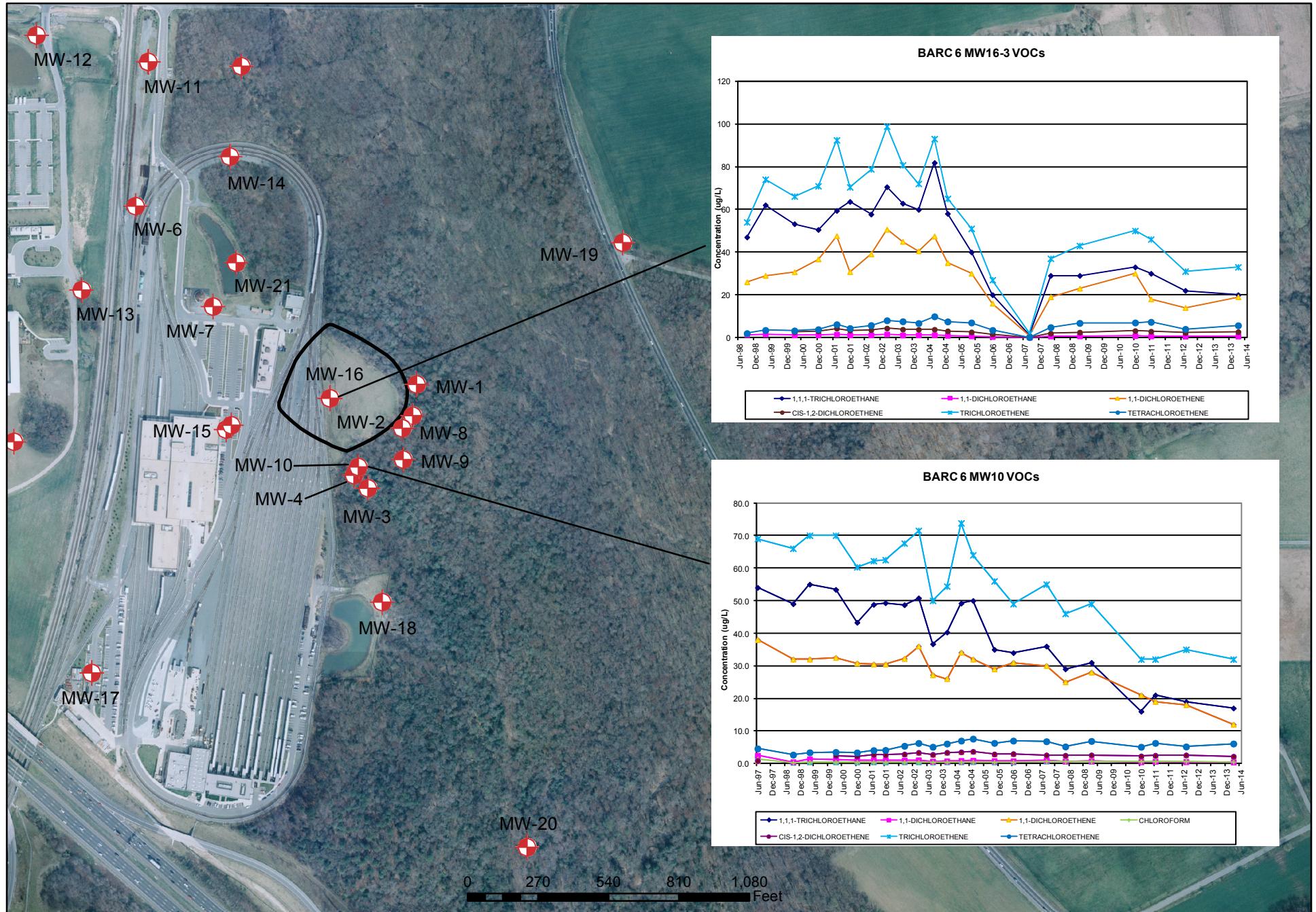






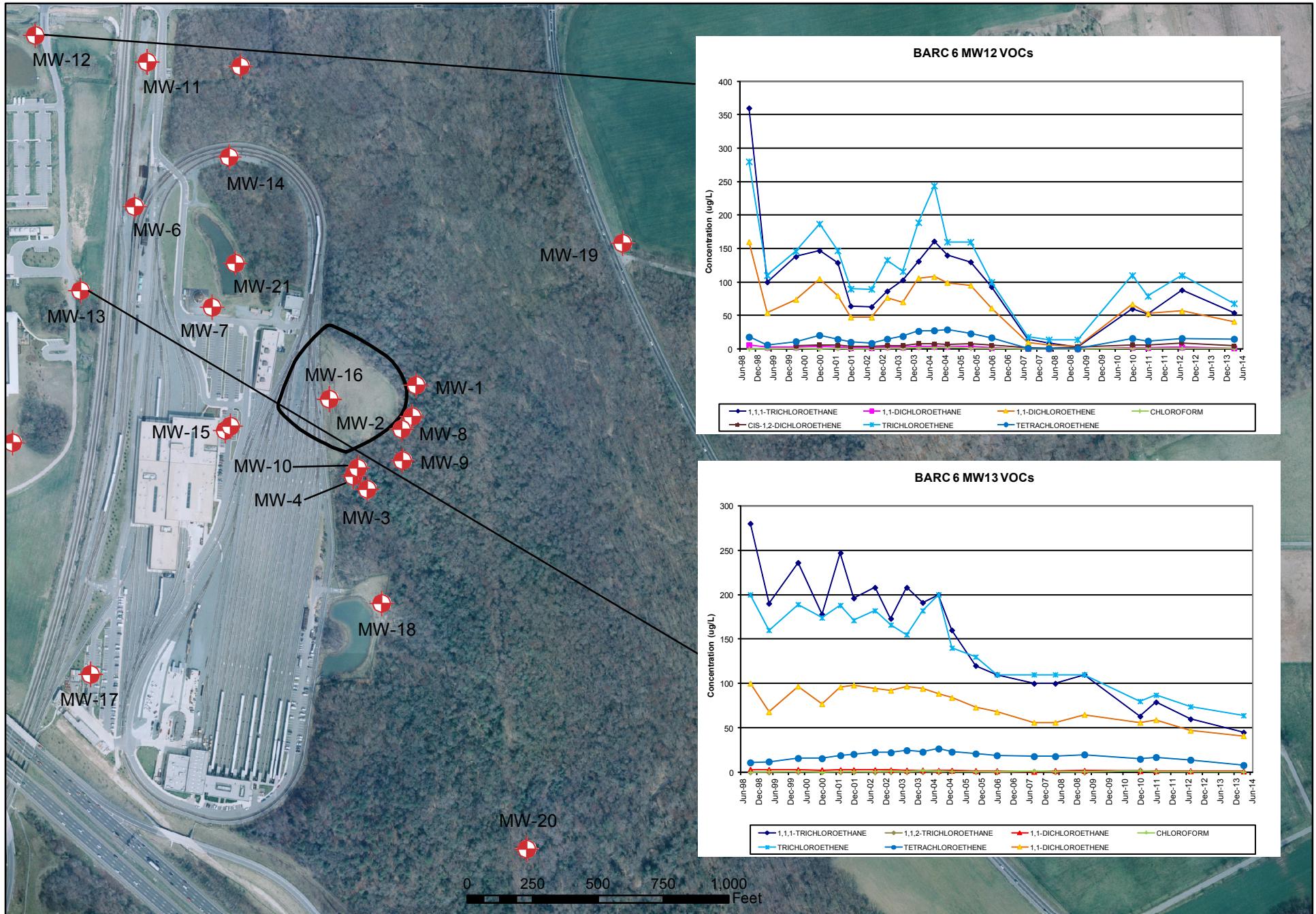


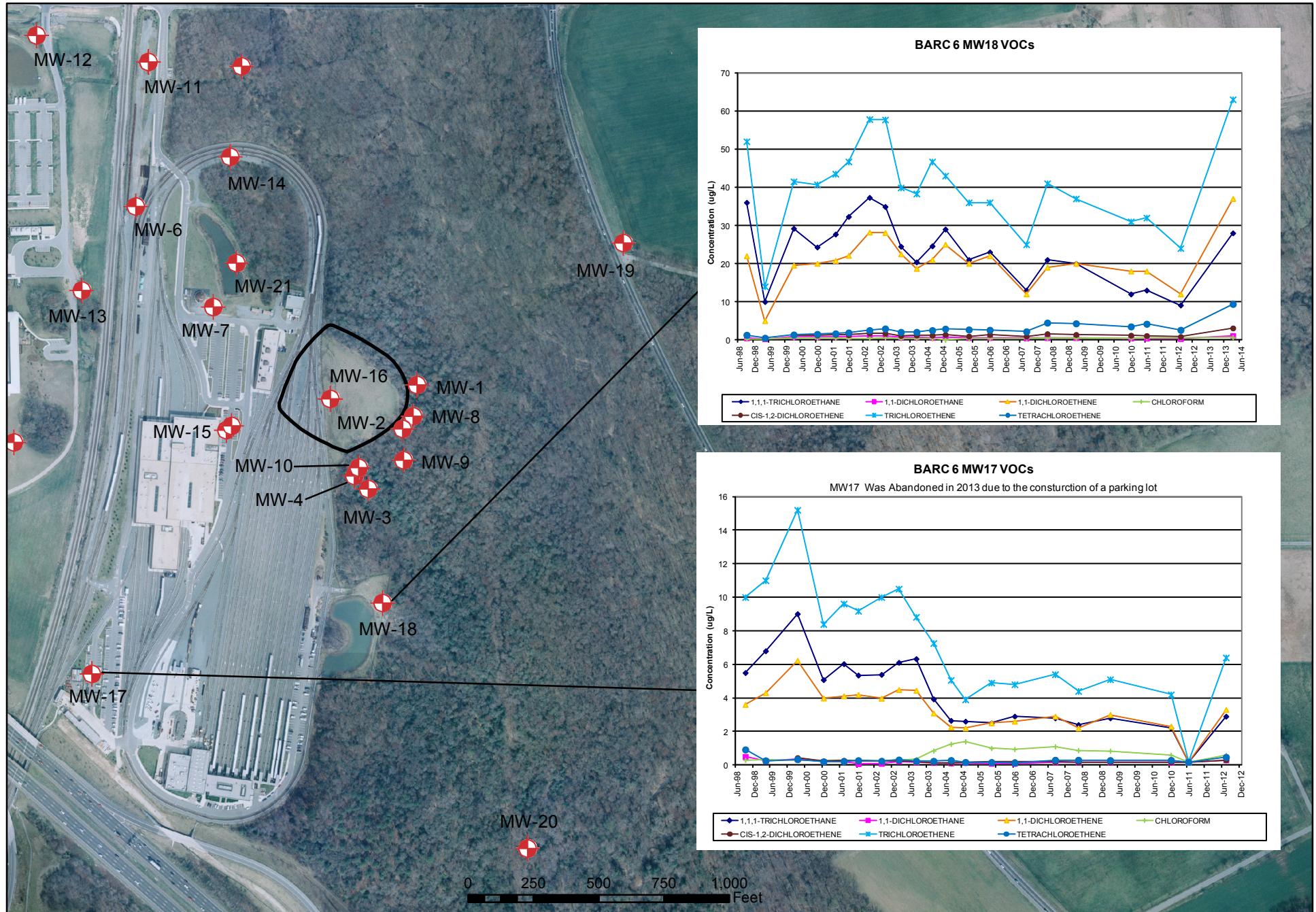
BMT Designers & Planners

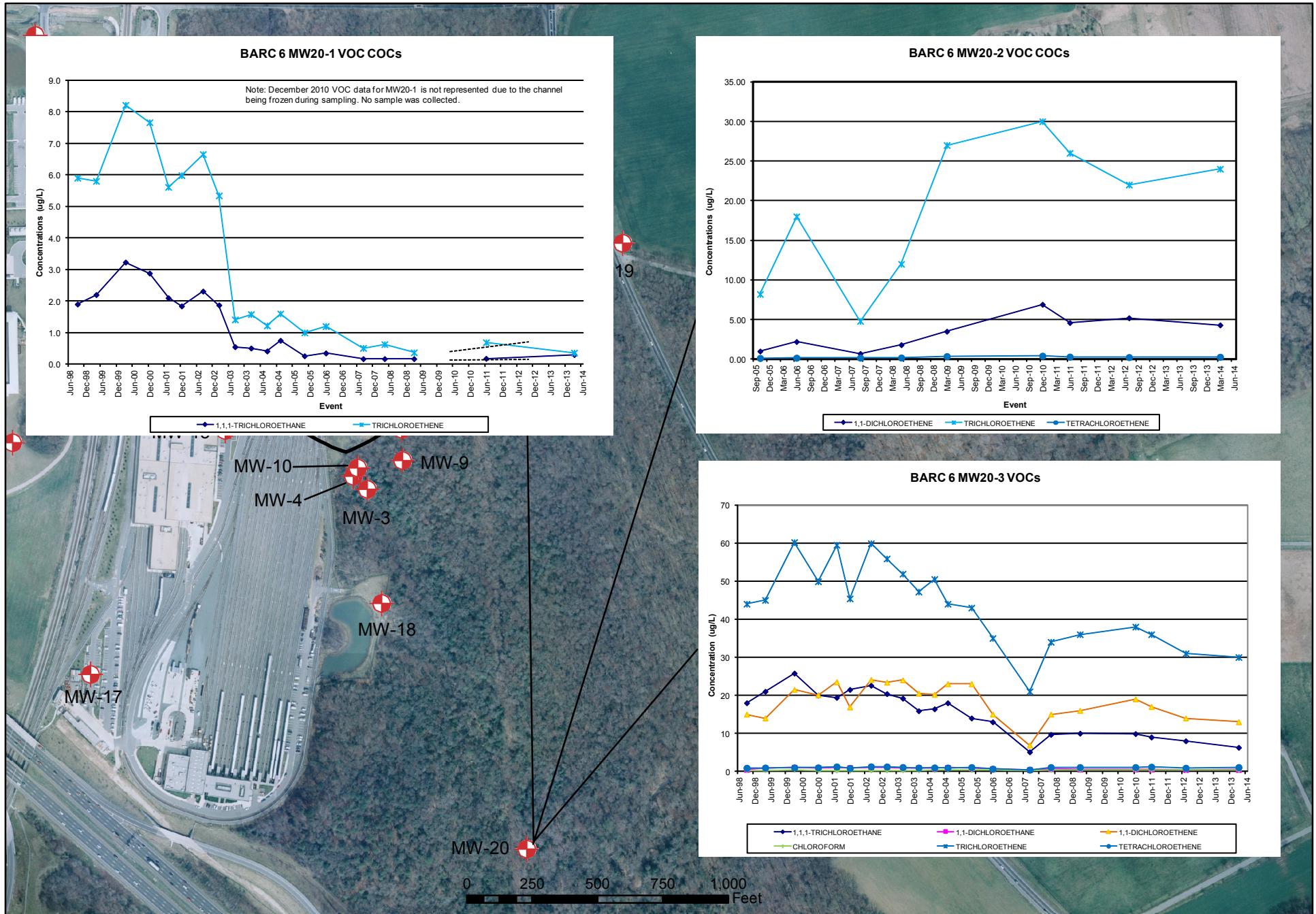


**BARC 6 - Biodegradable Site**  
**VOC Levels in Groundwater**  
Monitoring Wells MW10 and MW16-3 (Jun. '97 to Mar. 2014)

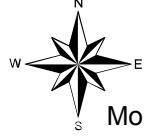
**BMT** Designers & Planners







**BARC 6 - Biodegradable Site  
VOC Levels in Groundwater**  
Monitoring Wells MW20-1 and MW20-3 (Jun. '97 to Mar. 2014)



**ATTACHMENT C**

**COC Tag Map**

Note: Data qualifiers are not presented on this COC Tag Map.  
Please refer to Tables A-2 and A-4 for laboratory and data validation qualifiers.

